US Army Corps of Engineers®
Los Angeles District

Prado Basin Ecosystem Restoration and Water Conservation Study

APPENDIX I

Cultural Resources Assessment

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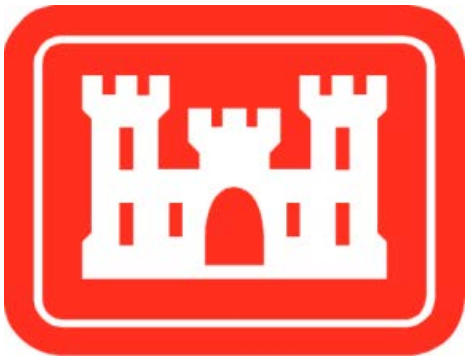
Appendix I

Cultural Resources



Part 1: Cultural Resource Report

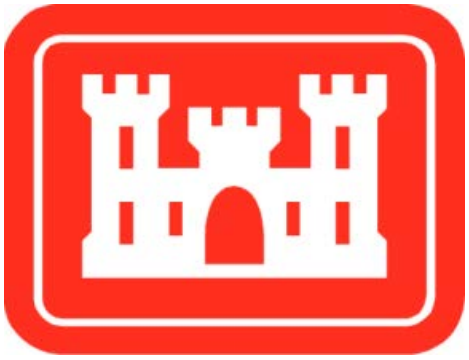
Part 2: SHPO and Tribal Consultation Letters

Part 3: Previous Consultations

Appendix I

Cultural Resources

Part 1: Cultural Resource Report



PHASE I CULTURAL RESOURCES ASSESSMENT FOR THE PRADO BASIN FEASIBILITY STUDY

PRADO BASIN, CALIFORNIA

Prepared For

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October 2018

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PHASE I CULTURAL RESOURCES ASSESSMENT FOR THE

PRADO BASIN
CALIFORNIA ECOSYSTEM RESTORATION AND WATER CONSERVATION
INTEGRATED FEASIBILITY REPORT

By

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Section 6, Township 3 South; Range 7 West on the USGS Prado Dam 7.5-Minute Quadrangle (S.B.B.M.)

Unsurveyed portion of Township 3 South, Range 7 West on the USGS Prado Dam 7.5-Minute Quadrangle (S.B.B.M.)

Key Words: Prado Basin, State Route 71, Chino Creek, Mill Creek, State Route 91, Prado Dam, Weir Canyon

MANAGEMENT SUMMARY

PURPOSE AND SCOPE

The Orange County Water District (OCWD) has partnered with the US Army Corps of Engineers (USACE) to study and evaluate opportunities to both increase water conservation at Prado Dam located in the City of Corona, Riverside County, California and to restore the quality and function of aquatic, riparian, and transitional habitats within portions of the larger Santa Ana River watershed. The study will culminate in the preparation of an Integrated Feasibility Report (Feasibility Report) which will analyze the alternatives and recommend a proposed action. The study involves four (4) focal areas that will enjoy ecosystem restoration measures to ensure water conservation, sediment management, recovery of native habitat and wildlife, and management of non-native habitat and wildlife. The focal areas include (1) the Mill Creek Focal Area; (2) the Chino Creek Focal Area; (3) the Santa Ana River Mainstem-Upstream Focal Area (SARM Upstream), and the Santa Ana River Mainstem-Downstream Focal Area (SARM Downstream). The Feasibility Report includes a Sediment Management Measure that would remove sediment from the Prado Basin and re-entrain it into the Santa Ana River downstream of Prado Dam. The sediment would be piped and/or hauled by heavy equipment to a Sediment Storage Site. The Sediment Storage Sites would hold the sediment until it is re-entrained into the river below the dam. There are four potential project alternatives planned for the project. These will be detailed in the project description below.

As part of its identification efforts, the OCWD retained VCS to complete a Phase I Cultural Resources Study for the proposed project. The cultural resources study is being completed to assist the Corps in meeting its responsibilities under Section 106 of the National Historic Preservation Act. This report follows the guidelines contained in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Office of Historic Preservation 1990). The Phase I study involved a literature and record search, site visits, and a reconnaissance survey of the four focal areas.

Records searches and literature reviews were conducted at the Eastern Information Center (EIC) at University of California, Riverside (UCR) for the sites located in the northwest corner of Riverside County (i.e. the southern portion of the Mill Creek and Chino Creek Focal Areas, the SARM Upstream focal area, and the western portion of the SARM Downstream focal area) (Attachment A), and at the South Central Coastal Information Center (SCCIC) for the sites located in San Bernardino County (i.e. the northern portion of the Mill Creek and Chino Creek Focal Areas) and Orange County (i.e. the eastern portion of the SARM Downstream Focal Area) (Attachment B).

DATES OF INVESTIGATION

The records search and literature review requested of the EIC for the southern Mill Creek, southern Chino Creek, SARM Upstream, and western portion of the SARM Downstream Focal Areas was completed on April 27, 2017. Patrick O. Maxon completed the records search for the northern portions of the Mill Creek and Chino Creek Focal Areas on April 20, 2017 at the SCCIC. The reconnaissance survey of the project upstream from Prado Dam was conducted on April 20, 2015, the downstream portion from the dam on May 21, 2015, the area that will hold the Sediment Storage Sites was surveyed on January 4, 2018, and the four Focal areas were subject to a cursory reconnaissance survey on May 3, 2018.

FINDINGS OF THE INVESTIGATION

Cultural and historic resources have been previously documented in each of the four focal areas of the project.

The SCCIC and EIC records searches identified 14 cultural resources within the project site boundaries of the Mill Creek Focal Area. These include five prehistoric sites and nine historic-era properties. Eight prehistoric sites and 19 historic-era properties are recorded within the boundary of the Chino Creek Focal Area, eight prehistoric sites and 16 historic-era properties recorded within the boundary of the SARM Upstream, and 19 prehistoric sites and three historic-era properties recorded within the boundary of the SARM Downstream. Several other historic sites were once within the boundaries of the current Area of Potential Effects (APE) but have been destroyed by development or flooding.

No previously unknown cultural resources were observed during the survey work; however, there are known buried sites that may be impacted by the placement of the Sediment Storage Sites.

CONSTRAINTS

The pedestrian survey conducted for the project was reconnaissance in nature. The purpose was to generally spot check the existing conditions and to ensure there are not obvious cultural resources constraints to the proposed project. Dense vegetation obscured much of the ground surface in the Chino Creek and Mill Creek focal areas, as well as portions of the SARM Upstream, and SARM Downstream focal areas. Ground visibility at the Sediment Storage Sites area was fair. All four focal areas and the Sediment Storage Site area exhibit modern disturbances to a greater or lesser degree.

Effects Analysis

This effects analysis is provided to assist the USACE and OCWD in fulfilling its compliance responsibilities under the National Environmental Policy Act (NEPA). Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (see *Code of Federal Regulations* [CFR], Title 36, Section 800) were used to identify historic properties within the APE. The criteria of adverse effects codified at 36 CFR 800.5 are used to assess the effects of the proposed project on the five mitigation sites.

Assessment of Effects

The pedestrian reconnaissance survey included a spot check of portions of the four focal areas and the Sediment Storage Sites area. The reconnaissance survey for all of the areas was inconclusive because of vegetation, disturbance, development, and inaccessibility to certain areas based on the limited nature of the survey. Although no known archaeological sites were discovered during the field surveys, because of the known presence of archaeological sites in the area, there is a potential for currently unknown cultural resources to be uncovered during excavation and restoration activities on the sites or if site areas are flooded, and there may be impacts to four archaeological sites at the Sediment Storage Sites. Potential adverse effects to such resources, if eligible for listing on the National Register of Historic Places, would be considered significant. The nature of the project efforts (water conservation, wildlife and plant management, etc.) and the ground disturbance of colluvial sediments during the sediment management efforts, makes it unlikely that buried resources will be uncovered during project activities in any areas other than the Sediment Storage Sites. The known sites within each of the four focal areas that might be inundated to the 505’ level have already been impacted by floodwaters in the past and will suffer no additional adverse effects as a result of the planned water conservation efforts.

There are four archaeological sites in the vicinity of the Sediment Storage Sites that will receive sediment and that may be partially or completely buried during the Feasibility Report work. The following recorded sites could be affected by the project (refer to Exhibit 2):

CA-RIV-5523H

A former poultry farm and ranch, this site will be completely buried by sediment. It has previously been evaluated by Greenwood and Associates and deemed not eligible for listing in the NRHP (Foster and Toren 1995). No additional archaeological investigations are necessary at this site.

CA-RIV-1039H

The former Ashcroft Family Ranch underwent testing in 1995 (Foster and Toren 1995) and was deemed eligible for listing in the NRHP. The testing revealed that subsurface components remain preserved under the top 50 centimeters agricultural plow zone and extend down to at least 140 centimeters. Data recovery excavations were completed by Statistical Research (Sterner et al. 2004) with the understanding that the site would be completely destroyed by the Sediment Storage Site work. Therefore, data recovery excavations in anticipation of the sediment storage work have already been completed as described above and no additional archaeological investigation is necessary.

CA-RIV-1044H

This former ranch underwent testing in 1995. It was deemed eligible for listing in the NRHP. Data Recovery excavations were undertaken in 2004 (Sterner et al. 2004) in anticipation of the site being destroyed by the Sediment Storage work. Although the proposed sediment storage project will potentially affect a small portion of the site – along its western boundary, additional data recovery excavations is not necessary

CA-RIV-3694H (3698H)

This site, the former site of the town of Rincon has been deemed eligible for listing in the NRHP (Greenwood 1987) and underwent focused data recovery excavations in 1992 (Foster and Toren 1995) as mitigation for impacts associated with the water conservation pool being raised to 505 feet elevation. A small portion, at the very southern edge of the site will be covered during the Feasibility Report work. Data recovery excavations in this area may be necessary to collect a representative sample of this area of the site prior to it being permanently covered.

In the event that unknown resources are uncovered during the project, the OCWD must comply with 36 CFR 800.13, which requires additional mitigation measures as developed in consultation with the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP).

RECOMMENDED CULTURAL RESOURCE MEASURES

Cult-1 If eligible archaeological site CA-RIV-3694H will be covered in sediment during the Feasibility Report study, data recovery excavation of those areas of the site effected by the project would be necessary.

Cult-2 A qualified Archaeologist should be retained to conduct monitoring as necessary during ground-disturbing activities such as vegetation removal, grading, and other excavations related to the Feasibility Report study. The Archaeologist should be present at the pre-grade conference and should establish a schedule for archaeological resource surveillance based on the nature of planned activities. The Archaeologist should establish, in cooperation with OCWD, procedures for temporarily halting or redirecting work, if any is ongoing, to permit the sampling, identification, and evaluation of cultural resources as appropriate. If the archaeological resources are found to be significant, the Archaeological Monitor

should determine appropriate actions, in cooperation with OCWD, for exploration and/or salvage. Significant sites that cannot be avoided will require data recovery measures and shall be completed upon approval of a Data Recovery Plan.

REGULATORY REQUIREMENT

RR Cult-1 Project-related earth disturbance has the potential to unearth previously undiscovered human remains, resulting in a potentially significant impact. If human remains are encountered during excavation activities, all work shall halt and the County Coroner shall be notified (*California Public Resources Code,* Section 5097.98). The Coroner will determine whether the remains are of forensic interest. If the Coroner determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code.* The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code,* Section 7050.5). If the landowner rejects the MLD's recommendations, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code,* Section 5097.98).

Compliance with Section 5097.9 of the *California Public Resources Code* would preclude significant impacts to human remains.

DISPOSITION OF DATA

This report will be filed with the OCWD, SCCIC, the EIC, and with VCS. All field notes and other documentation related to the study are on file at the VCS Orange County office.

1.0 UNDERTAKING INFORMATION/INTRODUCTION

The Orange County Water District (OCWD), under On-Call Agreement Number 0675, retained VCS to complete a Phase I cultural resources study for the proposed Feasibility Report. The OCWD is planning a variety of actions within four focal areas in the Prado Basin. The focal areas for the project are identified as the Chino Creek Focal Area, the Mill Creek Focal Area, the SARM Upstream Focal Area, and the SARM Downstream Focal Area.

1.1 AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the project will include the boundaries of all four Focal Areas: Chino Creek Alternative D Focal Area; the Mill Creek Focal Area; the SARM Upstream Focal Area; and the SARM Downstream Focal Area (Exhibit 1). The SARM Upstream Focal Area includes the Sediment Storage Sites immediately east of the Dam. It is here that known archaeological resources may be impacted by the project (Exhibit 2).

1.2 RANGE OF ALTERNATIVES

NEPA requires that a Draft EIS objectively evaluate a reasonable range of alternatives. Under NEPA, reasonable alternatives are those that are practicable or reasonable from a technical and economic perspective. Where alternatives have been eliminated from detailed study, the Draft EIS must discuss the reasons for their elimination. CEQA also requires than a Draft EIR include a discussion of reasonable project alternatives that would feasibly attain most of the project objectives but would avoid or lessen any significant effects of the Proposed Action.

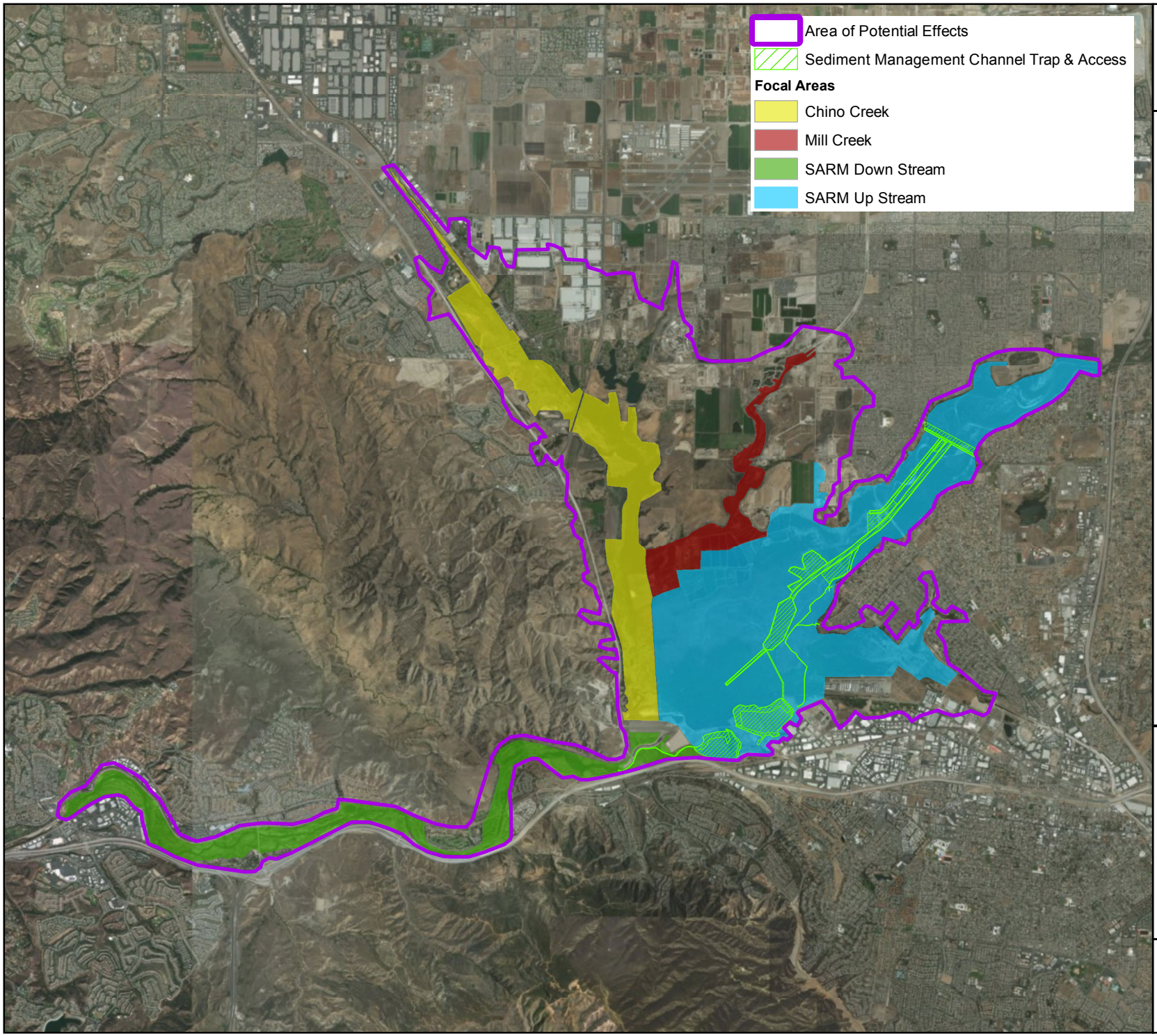
Alternatives Advanced for Further Review

At the completion of the USACE project design process, a Proposed Action and two Project Alternatives were advanced for further review along with No Federal Action/No Project Alternative. The Proposed Action and proposed Project Alternatives each include a different a mix of ecosystem restoration measures. The Project Alternatives advanced for further review are listed below.

- Alternative 1 No Federal Action/No Project
- Alternative 2 Plan 11 Proposed Action
- Alternative 3 Plan 9
- Alternative 4 Plan 14

Alternative 1 No Federal Action/No Project

Under NEPA (42 CFR, Part 1502.14) a No Federal Action Alternative must be considered and under CEQA a No Project Alternative must also be considered. The No Federal Action/No Project Alternative provides the basis for comparison with other alternatives, as it represents a condition for both the current and future under which nothing would be done to address the identified need for the Proposed Action. Under the No Federal Action/No Project Alternative there would be no ecosystem restoration measures implemented within any of the project area focal areas. Prado Dam would continue to operate with a maximum buffer pool water surface elevation of 498 ft. during the flood season and 505 ft. during the non-flood season and Prado Basin would continue to accumulate incoming sediment reducing water conservation storage capacity and would continue the degradation of habitat within Prado Basin. A summary of the average days of inundation occurring in the Prado Basin in 2021 and 2071 under the No Federal Action/No Project Alternative are shown in Table 1 and Table 2.



Orange County Water District

Exhibit 1

PRADO BASIN: Area of Potential Effects

N
W E
S

0 3,750 7,500
Feet

1 in = 7,500 ft

Map Date: April 2018
Data Source: OCWD, ESRI

TABLE 1: YEAR 2021 AVERAGE DAYS OF INUNDATION 498 FT. FLOOD SEASON/505 FT. NON-FLOOD SEASON

		days of inundation above selected pool elevations										
		470'	480'	490'	494'	498'	500'	505'	510'	520'	530'	540'
average monthly ranges	October	1 - 3	1 - 2	1	0	0	0	0	0	0	0	0
	November	8 - 12	6 - 10	5 - 8	2 - 4	0	0	0	0	0	0	0
	December	11 - 16	10 - 14	8 - 13	5 - 9	1	0	0	0	0	0	0
	January	16 - 23	14 - 22	13 - 20	9 - 14	2	1	1	0	0	0	0
	February	16 - 22	14 - 21	13 - 19	8 - 15	2	1	1	0	0	0	0
	March 1-14	5 - 10	4 - 10	4 - 8	3 - 6	2 - 4	1 - 3	0	0	0	0	0
	March 15-31	11 - 12	10 - 11	10	8	6 - 7	6	0	0	0	0	0
	April	12 - 17	12 - 16	11 - 15	9 - 13	7 - 11	5 - 10	0	0	0	0	0
	May	5 - 12	5 - 11	4 - 10	3 - 8	3 - 5	2 - 4	0	0	0	0	0
	June	1 - 3	1 - 3	1 - 3	1 - 2	1 - 2	0 - 1	0	0	0	0	0
	July	0 - 1	0 - 1	0 - 1	0	0	0	0	0	0	0	0
	August	1	1	1	0	0	0	0	0	0	0	0
	September	1 - 2	1	1	0	0	0	0	0	0	0	0
annual average range		88 - 133	80 - 123	69 - 110	49 - 81	24 - 35	18 - 26	2	1	0	0	0

TABLE 2: YEAR 2071 PRADO DAM DAYS INUNDATION 498 FT. FLOOD SEASON/505 FT. NON-FLOOD SEASON

Time Period		days of inundation above selected pool elevations										
		470'	480'	490'	494'	498'	500'	505'	510'	520'	530'	540'
average monthly ranges	October	1 - 2	1 - 2	1 - 2	1	0	0	0	0	0	0	0
	November	6 - 8	6 - 8	6 - 8	4 - 6	1	0	0	0	0	0	0
	December	6 - 9	6 - 9	6 - 8	5 - 7	1	0	0	0	0	0	0
	January	10 - 13	10 - 13	10 - 13	8 - 11	3	1	1	0	0	0	0
	February	9 - 12	9 - 12	9 - 12	8 - 10	3	1	1	0	0	0	0
	March 1-14	4 - 7	4 - 7	4 - 7	3 - 6	2 - 4	2 - 3	0	0	0	0	0
	March 15-31	9	9	9	8	7	6	0 - 1	0	0	0	0
	April	9 - 13	9 - 13	9 - 13	8 - 11	6 - 9	6 - 7	0	0	0	0	0
	May	3 - 5	3 - 5	3 - 5	3 - 5	2 - 4	1 - 3	0	0	0	0	0
	June	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0	0	0	0	0
	July	0	0	0	0	0	0	0	0	0	0	0
	August	1	1	1	0 - 1	0	0	0	0	0	0	0
	September	1	1	1	0 - 1	0	0	0	0	0	0	0
annual average range		58 - 79	58 - 79	57 - 79	48 - 66	25 - 32	18 - 23	3	1	0	0	0

Note: range in days of inundation values is based on estimated OCWD recharge rate ranging from 350 to 500 cfs

Alternative 2 Plan 11 Proposed Action

The mix of ecosystem restoration measures proposed Alternative 2 Plan 11 (Proposed Action) are listed in Table 3 and summarized below.

TABLE 3: ALTERNATIVE 2 PROPOSED ACTION PLAN 11

SARM Upstream Focal Area	SARM Downstream Focal Area	Chino Creek Focal Area	Mill Creek Focal
Water Conservation	Invasive Plant Management	Chino Creek Channel Restoration	Invasive Plant Management
Sediment Management	Sediment Management	Invasive Plant Management	Native Plantings
Invasive Plant Management	In-Stream Habitat Features	Native Plantings	Cowbird Trapping
Native Plantings		Cowbird trapping	
Riparian Edge Management			
Cowbird Trapping			
Non-Native Aquatic Management			

Water Conservation

The Water Conservation Measure would be implemented at the SARM Upstream Focal Area. The measure would permit the surface water elevation at Prado Dam to operate up to 505 ft. mean sea level (MSL) year-round for additional water conservation. The Water Conservation measure for this alternative would not include sediment removal, as there would be no accumulation of sediment due to water conservation operations conducted with the sediment management measure present, which is included in this alternative.

Sediment Management

This alternative includes the Sediment Management Measure with features located upstream and downstream along the mainstem of the Santa Ana River. Sediment would be removed from Prado Basin and re-entrained into the lower Santa Ana River below Prado Dam. A variety of features are required to implement the sediment management measure. The SARM Upstream features include an entrainment groin that would be constructed of sheet pile and derrick stone to control the horizontal and vertical location of the river channel. A trapezoidal earthen transition channel would convey flows from the entrainment groin into the sediment trap area and would include rip rap instream habitat features that would also double as grade control features. The transition channel would also include three fill areas where material would be placed to provide for the design gradient in the transition channel, along with an expansive floodplain area adjacent to the transition channel that would support native plantings at the Pheasant Field area within Prado Basin. Parallel to the transition channel would be an OCWD wetlands pilot channel. The pilot channel would also convey flows from the entrainment groin and deliver them to the existing wetland. The pilot channel would be a trapezoidal earthen channel with flow structures (piping and gates) to control the quantity of flow diverted to the OCWD Wetlands. A sediment trap would be excavated at the downstream end of the transition channel to provide a location for sediment to accumulate in-between sediment removal activities. A trap outlet channel would be constructed downstream of the trap to provide a means to drain water from the trap during sediment removal activities, thereby allowing dry excavation methods to be used. A series of access roads would be constructed around the all of the sediment management features to allow regular inspection, operation and maintenance activities to occur. Two sediment storage sites would be constructed

within Prado Basin which would provide a place to stockpile excavated sediment and process the sediment into a slurry mixture for re-entrainment downstream. A Santa Ana River Bike Trail flyover would be constructed over the existing access road to the USACE Prado Field Office to provide trail users with a safe crossing. The SARM Downstream facilities would include re-entrainment pipelines, booster pumps, access roads and discharge system. An access road dedicated to the re-entrainment system would be constructed along the south side of the existing spillway and along the south side of the Prado Dam Outlet Channel. The re-entrainment pipelines and booster pumps would be placed on the new access road and would run from the western-most sediment storage site (Site A) to the end of the concrete lined outlet channel. The discharge end of the re-entrainment pipeline would be positioned at the end of the concrete lined outlet channel and could be re-positioned by use of a crane or similar equipment to assure even dispersion of slurry into the dam outflow. The overall construction footprint of the sediment management features would be approximately 529 acres. All of the features would be constructed over a 3-year period and re-entrainment operations would start in year 3. Over the 50-year life of the project there would be approximately 25.3 million cubic yards of sediment removed from the basin and of that 16.6 million cubic yards would be re-entrained into the lower Santa Ana River.

Adaptive management monitoring would occur over the first 5 years of the project to help inform sediment transport and deposition trends and habitat responses. Monitoring would inform potential changes in amounts of sediment that can be re-entrained per volume of water and at what release rates re-entrainment effects are suitable for downstream habitat and management. This could affect the amount of sediment being removed from the basin, relative to available stock pile space as well as the total amount of sediment ultimately re-entrained.

Chino Creek Channel Restoration

The Chino Creek Channel Restoration measure would be implemented at the Chino Creek Focal Area. This Measure proposes the construction of a new shallow channel along the west side of Chino Creek between Euclid Avenue and Pine Avenue. The shallow channel would promote riparian habitat growth over areas that currently do not receive enough water to support riparian habitat. A portion of Chino Creek would be filled in order to force the water into the new shallow channel. This measure includes the construction of a diversion pipe, bio-engineered invert stabilizers and wildlife movement fencing and would have an overall construction footprint of 170 acres.

Invasive Plant Management

The Invasive Plant Management Measure includes activities to remove the initial biomass of invasive plants and would with herbicide application and biomass removal techniques staggered in time over the first five years of implementation. Therefore, the initial invasive plant management effort would be for a period of approximately 6 years per location. Not all areas to be treated for removal of non-native plants would be treated at the same time. A phased approach to implementation would have to be used given the areal extent and density of non-native plants present within the areas identified for management. The phasing of this measure at each focal area would coincide with other measures that would provide some of the access for invasive plant management.

The measure also includes the planting and management of native species to promote the re-establishment of native vegetation communities in areas that have been treated to remove invasive plants. Once the initial biomass of invasive vegetation has been removed from a target area, regular inspection and maintenance would occur over the 50 year life of the project to ensure that invasive plants are not re-established in treated areas. Invasive Plant Management would occur at SARM Up-Stream, SARM Downstream, Mill Creek and Chino Creek Focal Areas. Within all four Focal Areas approximately 355.70 acres of invasive plants would be removed.

Approximately 248 acres of invasive plants would be removed from the SARM Upstream Focal Area, 14 acres from the SARM Downstream Focal Area, and 34.59 acres from the Chino Creek Focal Area and 59.2 acres from the Mill Creek Focal Area.

Adaptive management monitoring of the implementation area would occur during and following the first six-year implementation effort. Retreatments during the first 6 years are factored into the construction effort and cost. Subsequent treatments to address return of invasive plants identified by monitoring would likely be necessary in following years, especially after large disturbances such high flow events and fires. Most treatments would be expected to be much smaller in scale than the initial effort during the construction phase.

Native Plantings

The Native Plantings Measure would be carried out at locations identified for restoration of native vegetation where minimal removal of invasive plants would be required prior to revegetation with native plants. Plantings would include seeding, pole staking, and planting of nursery-grown plants at areas that have reduced vegetative cover. The native plantings would occur at SARM Upstream, Chino Creek and Mill Creek Focal Areas. Within all three Focal Areas approximately 101.24 acres of area would be cleared and planted with native plantings. Approximately 41.3 acres of native plantings would occur at the SARM Upstream Focal Area, 42.94 acres at the Chino Creek Focal and 17.2 acres at the Mill Creek Focal Area. Each site would require some site preparation, but it would be expected to be minimal in comparison to the Invasive Plant Management measure. Site preparation would be expected to include minor grading and a minimal amount of weed management.

Adaptive management regular monitoring would be required to document the growth of the plantings and any potential weed or other issues. Supplemental watering could be required during the plant establishment period, which would be assumed to be limited to the first two years after implementation.

Riparian Edge Management SARM Upstream

The Riparian Edge Management measure would be carried out at the SARM Upstream Focal Area and would involve invasive plant removal, native plantings, vegetation trimming and maintenance to maintain a thriving riparian edge habitat for neo-tropical migratory birds and to provide a buffer to more interior habitats from potential road effects. Riparian edge management would be conducted along the proposed sediment removal trap channels and OCWD diversion channel. Approximately 44.5 acres of new riparian edge habitat would be created.

Adaptive management measures could include changed in level of effort and/or frequency of treatments to manage non-native plant presence or the addition of more edge management areas if roadways reveal the need for this type of management.

In-Stream Habitat Features SARM Downstream

The general intent of In-Steam Habitat Feature Measure would be to enhance habitat for native fish such as the Santa Ana sucker and arroyo chub. In-Stream Habitat Features would be implemented at both the SARM upstream and downstream focal areas.

At the SARM Downstream Focal Area 20 in-stream habitat features, measuring 70 ft. x 60 ft. (4,200 sq. ft.) each would be constructed. These features would induce upstream sediment deposition and localized downstream scour. These features would expose coarser grained sediment in localized scour areas to serve as fish habitat, and would also sequester sediment that is being re-entrained into Reach 9 as a part of the sediment management measure to help combat observed and expected channel incision.

Adaptive management monitoring of invert grade, channel depth, sediment aggradation and scour would be monitored to help determine potential adaptive management needs. Potential adaptive management activities are expected to include periodic repair to the in-stream habitat features due to damage from high flows, augmentation or removal of rock depending on observed and intended effect to geomorphology and associated aquatic habitat in the vicinity of the features.

Cow Bird Trapping

The Cow Bird Trapping Measure would provide control for this non-native avian species. The components of the measure would include trapping and other population control measure and would be implemented at the SARM Upstream, Chino Creek and Mill Creek Focal Areas. Within the three Focal Areas approximately 5,742 acres of area has been proposed for cow bird trapping. Approximately 3,920 acres of area have been proposed for Cow Bird trapping at the SARM Upstream Focal Area, 1,370 acres at the Chino Creek Focal Area and 452 acres at the Mill Creek Focal Area.

Non-Native Aquatic Species Management SARM Upstream:

The Non-Native Aquatic Species Management Measure includes activities to control and/or remove invasive aquatic species. The focus would be on large predatory fish species, such as carp, bass, and catfish that prey on native fish such as the Santa Ana sucker and arroyo chub. A combination of removal techniques such as netting, seining or electroshocking could be used. Non-Native Aquatic Species Management would occur at SARM Upstream Focal Area. Approximately 328.10 acres of open water habitat at the SARM Upstream Focal Area has been proposed for Non-Native Aquatic Species Management.

Efforts to implement non-native aquatic species management would occur after large flow events that push many of the non-native species downstream. Removal efforts would utilize electroshocking, seining, and dip nets, or other similar methods to remove non-native aquatic species from the system. Non-native aquatic species management events would be expected to occur on an average of 2-5 times per year, with 1-2 days spent on each watercourse per event.

Alternative 3 Plan 9 Ecosystem Restoration Measures

The mix of ecosystem restoration activities proposed under Alternative 3 Plan 9 are listed in Table 4 and summarized below.

TABLE 4: ALTERNATIVE 3 PLAN 9

SARM Upstream Focal Area	SARM Downstream Focal Area	Chino Creek Focal Area	Mill Creek Focal
Water Conservation with Incidental Sediment Removal	Invasive Plant Management	Chino Creek Channel Restoration	Invasive Plant Management
Invasive Plant Management		Invasive Plant Management	Native Plantings
Native Plantings		Native Plantings	Cowbird Trapping
		Cowbird trapping	

Water Conservation with Incidental Sediment Removal

The Water Conservation Measure would be implemented at the SARM Upstream Focal Area. The measure would permit the surface water elevation at Prado Dam to operate up to 505 ft. mean

sea level (MSL) year-round for additional water conservation. The Water Conservation Measure would include two sediment removal actions to address habitat impacts associated with induced sediment accumulation along the Santa Ana River upstream of the dam. A total of 125,000 cubic yards of sediment would be removed from the upstream reach of the Santa Ana River in two events for a total removal of 250,000 cubic yards of sediment excavated and placed in the sediment placement area (Site B) to address additional sediment accumulation that would occur from water conservation operations over the period of analysis, since water conservation would be implemented without the sediment management measure under this alternative.

The incidental sediment removal activities would involve five primary activities; the construction of a sediment removal trap, and construction of a sediment storage/green waste processing area, sediment removal by dry excavation, and permanent placement of the sediment in storage Site B.

The proposed sediment removal trap would be constructed outside of the nesting season (after August 15 and before March 1) near the discernable end of the Santa Ana River, within the southeast portion of Prado Basin near elevation 505 ft. The sediment removal trap would consist of approximately 13.2 acres and would have a maximum depth of 12 feet. A 25-foot-wide project access road would be constructed from the sediment removal trap to the sediment storage site and around the perimeter of the sediment removal trap. The access road around the perimeter of the sediment removal trap would provide a buffer between the sediment removal activities and adjacent habitat.

In order to construct the sediment removal trap and project access roads, all vegetation within the footprint of the sediment removal trap and project access roads would have to be removed. The vegetation removal would occur outside of nesting season. The above-ground vegetation would be cleared, followed by removal of the root system. The removed vegetation would be processed and converted into mulch to re-surface project access roads or would be trucked offsite for disposal.

To process the green waste and to temporarily store sediment removed from the sediment removal trap, an approximate 20.64-acre sediment storage site would be prepared by clearing or mowing surface vegetation on the site outside of the nesting season, and grading/re-contouring the area as necessary. At the sediment storage site, the green waste would be processed and converted to mulch, and the sediment removed from the sediment removal trap would be stored at the site and may be exported for a beneficial use over the 50-year project life.

Dry excavation would be used to remove sediment from the sediment trap area. Once the vegetation is removed heavy equipment would begin excavation of the sediment trap. The trap would be cut at varying depths and contoured to maximize inflow of new sediment into the trap site and create upstream native fish habitat benefits.

Chino Creek Channel Restoration

Alternative 3 Plan 9 includes the same Chino Creek Channel Restoration Measure included in the Proposed Action.

Invasive Plant Management

Alternative 3 Plan 9 includes the same Invasive Plant Management Measure included in the Proposed Action.

Native Plantings

Alternative 3 Plan 9 includes the same Native Plantings Management Measure included in the Proposed Action.

Cow Bird Trapping

Alternative 3 Plan 9 includes the same Cow Bird Trapping Measure included in the Proposed Action.

Alternative 4 Plan 14

The mix of ecosystem restoration activities proposed under Alterative 4 Plan 14 are listed in Table 5 and summarized below.

TABLE 5: ALTERNATIVE 4 PLAN 14 ECOSYSTEM RESTORATION MEASURES

SARM Upstream Focal Area	SARM Downstream Focal Area	Chino Creek Focal Area	Mill Creek Focal
Water Conservation I	Invasive Plant Management	Chino Creek Channel Restoration	Invasive Plant Management
Sediment Management	Sediment Management	Invasive Plant Management	Native Plantings
Invasive Plant Management	Non-native Aquatic Management	Native Plantings	Cowbird Trapping
Native Plantings	In-Stream Habitat Features	Cowbird trapping	Feral Pig Management
Riparian Edge Treatment		Feral Pig Management	
In-Stream Habitat Features			
Feral Pig Management			
Non-Native Aquatic Control			
Cowbird Trapping			

Water Conservation

Alternative 4 Plan 14 includes the same Water Conservation Measure included in the Proposed Action.

Sediment Management

Alternative 4 Plan 14 includes the same Sediment Management Measure included in the Proposed Action. ***Chino Creek Channel Restoration***

Alternative 4 Plan 14 includes the same Chino Creek Channel Restoration Measure included in the Proposed Action.

Invasive Plant Management

Alternative 4 Plan 14 includes the same Invasive Plant Management Measure included in the Proposed Action.

Native Plantings

Alternative 4 Plan 14 includes the same Native Planting Management Measure included in the Proposed Action.

Riparian Edge Treatment

Alternative 4 Plan 14 includes the same Riparian Edge Treatment Measure included in the Proposed Action.

In-Stream Habitat Features SARM Downstream:

Alternative 4 Plan 14 includes the same In-Stream Habitat Features SARM Downstream Measure included in the Proposed Action.

In-Stream Habitat Features SARM Upstream

In-stream habitat features in the SARM upstream focal area would be composed of approximately 10 rock groins, measuring 50 ft. x 325 (416, 250 sq. ft.), that would be intended to create localized pools and exposing of existing gravel beds and cobbles that are presumed to be buried under a lens of sand. The SARM upstream in-stream habitat features would be located within the transitional channel leading towards the sediment trap.

The invert grade, channel depth, sediment aggradation and scour would be monitored to help determine potential adaptive management needs. Potential adaptive management activities are expected to include periodic repair to the in-stream habitat features due to damage from high flows, augmentation or removal of rock depending on observed and intended effect to geomorphology and associated aquatic habitat in the vicinity of the features.

Cow Bird Trapping

Alternative 4 Plan 14 includes the same Cow Bird Trapping Measure included in the Proposed Action.

Non-Native Aquatic Species Management SARM Downstream:

The Non-Native Aquatic Species Management Measure includes activities to control and/or remove invasive aquatic species. The focus would be on large predatory fish species, such as carp, bass, and catfish that prey on native fish such as the Santa Ana sucker and arroyo chub. Non-Native Aquatic Species Management would occur at the, SARM Downstream Focal Area. Approximately 68 acres of open water habitat has been proposed for Non-Native Aquatic Species Management at the SARM Downstream Focal Area.

Adaptive Management: Measures could include changes to the frequency of management events, since they are dependent on weather. New techniques may also be implemented to increase efficiencies.

Feral Pig Management

The Feral Pig Management Measure would provide for the control of feral pigs through a combination trapping, telemetry and other population control techniques. The Feral Pig Management Measures would be implemented at the SARM Upstream, Chino Creek and Mill Creek Focal Areas. Within all three Focal Areas a total of 5,742 acres of area has been proposed for Feral Pigs Management. Approximately 3,920 acres of area have been proposed for Feral Pigs Management at the SARM Upstream Focal Area, 1,370 acres at the Chino Creek Focal Area and 452 acres at the Mill Creek Focal Area.

Feral pigs would be trapped using box traps, corral traps, panelized corral traps or other similar methods. A portion of the trapped pigs would be removed from the system and others would be fitted with a satellite collar equipped with GPS receivers and released. This “Judas” technique is intended to help decipher where pigs tend to congregate. Since they are social animals, individual pigs will general seek out other pigs. The ability to follow the pigs due to their GPS enabled collars would help locate future traps, follow movement patterns, and document potential habitat degradation caused by the pigs (Christie, Jocelyn et al., 2014). Initial site selection for traps would likely be based on field observations and camera traps to find concentrations of pig activity. The type of trap used would be based on local site conditions. It would be advantageous to try different trap and baiting designs in an effort to learn which works best for long term management.

After initial trapping efforts, activities subsequent would include monitoring of pigs fitted with GPS collars and would be followed on with similar efforts. The locations for traps would be informed by lessons learned from GPS data gathered from “Judas” pigs, field observations, and camera trap results.

1.3 PROJECT PERSONNEL

The cultural resources study was completed by Patrick O. Maxon, M.A., RPA and Melissa K. Macias.

2.0 REGULATORY SETTING

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern cultural resources and must be adhered to both prior to and during project implementation. There is a federal action under the National Environmental Policy Act (NEPA) Therefore, this Phase I Cultural Resources Study is being conducted under the requirements of Section 106 of the National Historic Preservation Act (16 *United States Code* [USC] Section470f) and its implementing regulations (36 *Code of Federal Regulations* [CFR] Part 800, Protection of Historic Properties) to assist the U.S. Army Corps of Engineers (USACE) in fulfilling its NHPA responsibilities. The report is also intended to satisfy the requirements of the California Environmental Quality Act (CEQA) (*California Public Resources Code* [PRC], Section 21083.2) and the State CEQA Guidelines (*California Code of Regulations* [CCR], Title 14, Section 15064.5).

2.1 FEDERAL

Cultural resources are considered during federal undertakings chiefly under NEPA and under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) through one of its implementing regulations (36 CFR 800). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of the NHPA. Other federal laws include the Archaeological Data Preservation Act of 1974, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1989, among others.

Section 106 of the NHPA (16 USC 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce the impacts to an acceptable level. Significant cultural resources are those resources that are listed in or are eligible for listing in the NRHP per the criteria listed at 36 CFR 60.4 below:

> The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:
>
> (a) Are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) Are associated with the lives of persons significant in our past; or
>
> (c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (d) Have yielded, or may be likely to yield, information important in prehistory or history.

2.2 STATE

The California Environmental Quality Act (CEQA) requires a lead agency to determine whether a project would have a significant effect on one or more historical resources. According to Section 15064.5(a) of the State CEQA Guidelines, a “historical resource” is defined as a resource listed

in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (PRC Section21084.1); a resource included in a local register of historical resources (14 CCR 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (14 CCR 15064.5[a][3]).

The basic guidelines that were used for the cultural resources study were Section 5024.1 of the PRC; Section 15064.5 of the State CEQA Guidelines (14 CCR); and Sections 21083.2 and 21084.1 of the CEQA Statutes. PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the CRHR is to maintain a list of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR, which were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP (per the criteria listed at 36 CFR 60.4), are stated below.

> The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:
>
> (1) Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States; or
>
> (2) Are associated with the lives of persons important to local, California, or national history; or
>
> (3) Embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values; or
>
> (4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition, according to Section 15064.5(a)(3)(A–D) of the State CEQA Guidelines (14 CCR), a resource is considered historically significant if it meets the criteria for listing in the NRHP (per the criteria listed at 36 CFR 60.4). Impacts that affect those characteristics of the resource that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered to have a significant effect on the environment. Impacts to cultural resources from a proposed project are thus considered significant if the project would (1) physically destroy or damage all or part of a resource; (2) change the character of the use of the resource or physical feature within the setting of the resource that contributes to its significance; or (3) introduce visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a cultural resources investigation is to evaluate whether any cultural resources remain exposed on the surface of the project site or can reasonably be expected to exist in the subsurface. If resources are discovered, management recommendations would be required for evaluation of the resources for NRHP or CRHR eligibility.

Broad mitigation guidelines for treating historical resources are codified in Section 15126.4(b) of the State CEQA Guidelines. To the extent feasible, public agencies should seek to avoid significant effects to historical resources, with preservation in place being the preferred alternative. If not feasible, a data recovery plan shall be prepared to guide subsequent excavation. Mitigation for historical resources (e.g., buildings, bridges, and other structures) that is consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Weeks and Grimmer 1995) is generally considered mitigated to below a level of significance.

2.3 HUMAN REMAINS

Section 7050.5 of the *California Health and Safety Code* provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

Section 5097.98 of the PRC states that, if remains are determined by the Coroner to be of Native American origin, they must notify the Native American Heritage Commission (NAHC) within 24 hours which, in turn, must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendant(s) shall complete his/her inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

3.0 ENVIRONMENTAL SETTING

Situated north of Corona, California, the Prado Basin is generally bound by the Chino Hills to the west; the foothills of the Santa Ana Mountains to the south; the Jurupa Hills and Norco Bluff to the east; and an unnamed series of low hills to the north. Comprising nearly 9,000 acres, the Prado Basin is drained by the Santa Ana River and its main tributary in the basin, Chino Creek (Swope 2013: 9). At a greater scale, Prado Basin is situated within the east-west-trending Transverse Range Province at the western edge of the San Bernardino Valley east of the Los Angeles Basin (Swope 2013: 11).

Annual climate varies between dry, moderate summers and wet, temperate winters. Rainfall rarely exceeds 15 inches; occurring primarily in the winter months (Swope 2013: 11). The fertile alluvial sediments support a variety of coastal sage scrub, valley grassland, and riparian woodland community species (Swope 2013: 13). Buckwheat, prickly pear, sumac, and sage may be found on the gently sloping hills; various grasses and wildflowers may be found in the valleys; and sycamore, willow, walnut, and cottonwood is found near the drainages.

Wildlife in the basin includes deer, rabbits, and a variety of small rodents, and it historically included antelope. Birds inhabiting the basin consist of pigeons, doves, owls, crows, sparrows, and various raptors; seasonal birds include ducks, geese, gulls, pelicans, and herons (Swope 2013: 13).

4.0 CULTURAL BACKGROUND

4.1 PREHISTORIC BACKGROUND

Several chronologies are generally used to describe the sequence of the later prehistoric periods of Southern California. William Wallace (1955) developed the first comprehensive California chronologies and defines four periods for the southern coastal region.

Wallace's synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them" (Moratto 1984:159). Wallace relies upon the concept of "cultural horizons", which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, Wallace's model does not allow for much cultural variation in the same time period, nor does it provide precise chronological dates for each temporal division. Although now more than 50 years old, the general schema of the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

Horizon I: Early Man or Paleo-Indian Period (11,000 BCE[1] to 7,500 BCE). While Wallace (1955) initially termed this period the Early Man Horizon (I), this early stage of human occupation is commonly referred to as the Paleo-Indian Period today (Chartkoff and Chartkoff 1984:24). The precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well made stone projectile points and tools such as scrapers and choppers. Encampments were probably temporary, located near major kills or important resource areas.

Horizon II: Milling Stone Assemblages (7,500 BCE to 1,000 BCE). Encompassing a broad expanse of time, the Milling Stone Period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migrations was likely practiced, with movements coinciding with ripening vegetal resources and the periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's (1968) Encinitas Tradition. Warren (1968) suggests that, as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetable resources.

More recent studies suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period (Koerper 1981; Koerper and Drover 1983). At present, little is known about cultural change during this time period in Southern California. While this lack of noticeable change gives the appearance of cultural stasis, almost certainly many regional and temporal cultural shifts did occur. Future research that is focused on temporal change in the Milling Stone Period would greatly benefit the current understanding of Southern California prehistory.

Horizon III: Intermediate Cultures (1,000 BCE to 750 CE[2]). The Intermediate Period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools (e.g., projectile points) generally decrease in size, but increase in number. Abundant bone and shell remains have been recovered from sites dating to these time periods.

1 BCE is defined as "Before Common Era" and generally refers to that time period commonly referred to as "Before Christ" (B.C.).

2 CE is defined as "Common Era" and generally refers to that time period commonly referred to as "annō Dominī" (A.D.).

In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture became more diverse and elaborate and included steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

Horizon IV: Late Prehistoric Cultures (750 CE to 1769 CE). During the Late Prehistoric Period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate Period. Shell beads, ornaments, and other elements of material culture continue to be ornate, varied, and widely distributed; the latter evidence suggests elaborate trade networks. Warren's (1968) scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric Period includes the first few centuries of early European contact (1542–1769 CE); it is also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population (Wallace 1955:223). Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

Evidence is growing that prehistoric cultural change has been much more variable through time and across culture areas than previously thought. Cultural traits such as maritime economies, seafaring, complex trade networks, and year-round occupation of villages appear to have developed much earlier than previously thought. Culture change during the Late Prehistoric Period, in particular, may have been driven more by environmental and resource pressures than optimal adaptation to the environment (Byrd and Raab 2007).

5.0 ETHNOGRAPHIC BACKGROUND

5.1 GABRIELINO/TONGVA

At the time of European contact, this part of Riverside/San Bernardino Counties was the home of the Gabrielino. The Gabrielino are those people and their descendants who became associated with Mission San Gabriel Arcángel, which was established in south-central Los Angeles County on September 8, 1771, in what has ever since been called the San Gabriel Valley. Today, these people are sometimes referred to as the *Tongva,* although the term apparently originally (i.e., before the arrival of Euro-Americans) referred to the inhabitants of the San Gabriel Valley only. In either case, the inhabitants of Santa Catalina Island and San Clemente Island are often included as being parts of this tribe, as are the Fernandeño, who inhabited most of the San Fernando Valley.

The ancestral Gabrielino arrived in the Los Angeles Basin probably before 500 BCE as part of the so-called Shoshonean (Takic speaking) Wedge from the Great Basin region and gradually displaced the indigenous peoples, who were probably Hokan speakers. Large, permanent villages were established in the fertile lowlands along rivers and streams and in sheltered areas along the coast. Eventually, Gabrielino territory encompassed the watersheds of the Los Angeles, San Gabriel, Rio Hondo, and Santa Ana Rivers, which includes the greater Los Angeles Basin, to perhaps as far south as Aliso Creek, as well as portions of the San Fernando, San Gabriel, and San Bernardino Valleys. Gabrielino territory also included the islands of San Clemente, San Nicholas, and Santa Catalina (McCawley 1996:23–24; Bean and Smith 1978:538–540). Populations may have numbered as many as 10,000 individuals at their peak in the Precontact Period.

The subsistence economy of the Gabrielino was one of hunting and gathering. The surrounding environment was rich and varied, and the natives were able to exploit mountains, foothills, valleys, deserts, and coasts. As was the case for most native Californians, acorns were the staple food (by the Intermediate Horizon), supplemented by the roots, leaves, seeds, and fruit of a wide variety of flora (i.e., cactus, yucca, sage, and agave). Fresh and saltwater fish, shellfish, birds, insects, and large and small mammals were exploited.

Kroeber (1925:621) considered the Gabrielino:

> . . . to have been the most advanced group south of Tehachapi, except perhaps the Chumash. They certainly were the wealthiest and most thoughtful of all the Shoshoneans of the State, and dominated these civilizations wherever contacts occurred.

A Gabrielino community known to be located near the project sites was named *Pashiinonga*. Located on the Rancho del Chino, the name was apparently the Tongva name for the Rancho. Its inhabitants were forcibly relocated to Mission San Gabriel (McCawley 1996:48–49).

The Prado Basin lies within the southernmost territory of the Serrano Indians (Kroeber 1925; Bean and Smith 1978). The Serrano, so named by the Spanish because of their tenure in the San Bernardino Mountains, occupied that region from the mountains, downstream along the Mojave River and eastward to the Mojave sink; southward to as far as the Prado Basin and the northern foothills of the Santa Ana Mountains. Serrano Indians in the vicinity of the Mojave sink were known by the Desert Mojave as *Vanyume.* The Serrano spoke a language from the Takic subfamily of the Uto-Aztecan linguistic family (Moratto 1984:534). Serrano territory was bound on the north, east, and west by Numic-speaking groups consisting of Paiute/Chemehuevi, Kawaiisu, and Panamint, respectively. Serrano territory was frequented by these groups and intermarriage was

common (Moratto 1984). Although little ethnographic data exists describing the settlement subsistence systems of the Serrano, they probably lived similarly to Kitanemuk and Cahuilla. Serrano subsisted by hunting and gathering seasonally and exploiting large and small game as well as a variety of staple vegetal foods such as acorns, pinyon nuts, mesquite beans, chia, ricegrass, tubers, and greens (Bean and Smith 1978). Mountain and high desert resources were exploited seasonally and permanent and semi-permanent villages formed from autonomous political patrilineal clans, maintaining bonds with neighboring clans through economic, marital, and ceremonial reciprocity (Bean and Smith 1978).

5.2 PRADO BASIN HISTORY

The Prado Basin was named for the lush grassy flood plains that characterized that portion of the Santa Ana Canyon. The rich forage attracted Native Americans for thousands of years and provided a prehistoric route from the Colorado River region to the west coast. Similarly, the Santa Ana Canyon signified one of the most important overland routes for European travelers from California's interior southern deserts to the west coast. In 1938, the Prado Dam was authorized for construction by Riverside County. Periodic flooding down the Santa Ana Canyon was successfully halted following the construction of the dam.

Yorba and Slaughter Families Adobe

Constructed in 1852, the Yorba and Slaughter Families Adobe is one of the oldest adobe residential structures in San Bernardino County. The site served as a residence, first by the Yorbas, later by the Slaughters, and over the ensuing years, was a post office, saloon, dairy, and winery; it was also a Butterfield Overland Mail stage stop on the Fort Yuma to Los Angeles Road. The site was listed in the NRHP in 1975.

6.0 METHODS

6.1 CULTURAL RESOURCES RECORDS SEARCH

Records searches and literature reviews were conducted at the Eastern Information Center (EIC) at University of California, Riverside (UCR) for the sites located in the northwest corner of Riverside County (i.e. the lower portion of the Mill Creek and Chino Creek focal areas, the SARM Upstream Focal Area, and the western portion of the SARM Downstream Focal Area (Attachment A), and at the South Central Coastal Information Center (SCCIC) for the sites located in San Bernardino County (i.e. the upper portion of the Mill Creek and Chino Creek Focal Areas) and Orange County (i.e. the eastern portion of the SARM Downstream Focal Area (Attachment B).

This report follows the guidelines contained in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Office of Historic Preservation 1990).

Discussions with the USACE determined that no more than a $^{1}/_{8}$-mile buffer was needed for the records search. Sources consulted included archaeological records, Archaeological Determinations of Eligibility, historic maps, and the Historic Property Data File (HPDF) maintained by the California Office of Historic Preservation. The HPDF contains listings for the CRHR and/or NRHP, California Historical Landmarks, and California Points of Historical Interest.

6.2 NATIVE AMERICAN SCOPING

Native American scoping, pursuant to the requirements of Assembly Bill (AB) 52, is being completed by the OC Water District.

7.0 RESULTS

7.1 CULTURAL RESOURCES RECORDS SEARCHES

Chino Creek Focal Area

As identified in Table 6, 28 cultural resources have been recorded within a $^1/_8$ mile radius of the Chino Creek Focal Area. Of those, eight are located within the focal area boundary (marked with an asterisk), described after the table, and depicted on Exhibit 3, below.

TABLE 6: CULTURAL RESOURCES SITES RECORDED WITHIN ONE-EIGHTH MILE OF CHINO CREEK FOCAL AREA

Site Number	Recorder/Year (most recent)	Description
San Bernardino County		
CA-SBR-001543	Langenwalter and Brock 1983	Prehistoric site
CA-SBR-001571/H	Langenwalter and Brock 1983	Prehistoric site/historic refuse
CA-SBR-002317H	Douglas 1980	Yorba Slaughter adobe
CA-SBR-004032	Macko 1982	Prehistoric lithic scatter, milling feature
CA-SBR-006024H	Toren 1987	Joseph Slaughter Residence
CA-SBR-006025H*	Toren 1987	Hode Slaughter Ranch
CA-SBR-006026H*	Toren 1987	Wells Ranch
CA-SBR-006817H	McKenna 1991	Pomona-Rincon Road
CA-SBR-007010H	Alexandrowicz 1991	Hunters Hill
CA-SBR-007137H	Greenwood and Associates 1992	Historic
CA-SBR-12354	CRM Tech 2004	Unknown
CA-SBR-13412	Dice 2007	Historic water conveyance structure
CA-SBR-12613H (36-013627)*	Sanka et al. 2012	Historic structure
CA-SBR-013729	Dice 2007	Historic site
CA-SBR-024903*	Dice 2012	Cypress Channel Historic Structure
Riverside County		
CA-RIV-0100	Macko 1998	Lithic, ceramic scatter, historic structure
CA-RIV-0653*	Hogan 1998	Lithic scatter, hearth, adobe structure
CA-RIV-1098	Hogan 1998	Lithic scatter, hearth
CA-RIV-2203	Schwartz 1981	Historic site
CA-RIV-2778*	Langenwalter and Brock 1984	Serrano House
CA-RIV-2797*	Langenwalter and Brock 1984	Prehistoric site
CA-RIV-3508	Panek 1978	Historic site
CA-RIV-4727	Hampson 1992	Historic site
CA-RIV-4760	Hampson 1992	Historic site
CA-RIV-4761	Hampson et al. 1992	Historic site
CA-RIV-4731*	Hampson and Kaptain 1992	Historic site
P-33-013543	Unknown	Prehistoric site
P-33-013544	Unknown	Prehistoric site
*Located within the focal area		

CA-SBR-006025H (36-006025): This site is the location of the Hode Slaughter Ranch, approximately [redacted] Only foundations and rubble remain. Elevation: [redacted]

CA-SBR-006026H (36-006026): This site is the location of the Wells Ranch; [redacted] All the buildings were demolished in the 1940s. Only footings and refuse scatters remain. [redacted]

CA-SBR-12613 (36-013627): This resource is a portion of the historical-age Southern Sierras Power Company power line on steel towers that extends through the Focal Area in a roughly east-west direction, [redacted]. The resource has been deemed not eligible for listing. Elevation varies.

CA-SBR-024903 (36-024903): This site is a segment of the open-air Cypress Channel. It is currently used by the El Prado Golf Course for channeling runoff water, where it now ends. Elevation: [redacted]

CA-RIV-0653/H: approximately [redacted] This site is a late Millingstone prehistoric site with a historic component tested by Brock and Langenwalter (1983) and by Grenda and Gray (1997). The site appears to have been destroyed or buried. Elevation: [redacted]

CA-RIV-2778H: This site is the location of the historic Serrano House, home and farm of Francisco Serrano. It was tested in the 1980s by ECOS Management. It is located along the old Pomona-Rincon Road, [redacted]. No remnants of the site are evident. Elevation: [redacted]

CA-RIV-2797: This site is a lithic scatter of projectile points and groundstone, located in a plowed field when recorded in 1931. It was inaccessible in the 1980s as it was below the water table. Elevation: 485' amsl.

CA-RIV-4731: This resource is the Chino Creek Bridge, built in 1904, and located approximately [redacted]. The bridge was demolished after the construction of Prado Dam. Elevation: 510' amsl.

The SCCIC and EIC Records searches and literature reviews showed that 66 cultural resources studies have been completed within a $^1/_8$ mile radius of the Chino Creek Focal Area (Table 7). Of those, 20 included some or all of the project site.

TABLE 7: CULTURAL RESOURCES STUDIES CONDUCTED WITHIN ONE-EIGHTH MILE OF THE CHINO CREEK FOCAL AREA

Report Number	Recorder/Year	Type of Study
San Bernardino County		
SB-00202	Archer 1974	Yorba-Slaughter Adobe
SB-00272*	San Bernardino County Museum Association 1975	Archaeological Impact Report
SB-00954*	Mabry and Douglas 1980	Cultural Resource Study
SB-01029*	Foster and Greenwood 1980	Cultural Resource Overview
SB-01038	Venner 1977	Interim Report

Report Number	Recorder/Year	Type of Study
San Bernardino County		
SB-01287*	Lerch 1982	Cultural Resources Assessment
SB-1372	Weil and Macko 1983	
SB-01395	Wilkerson 1983	History of the Yorba Slaughter Adobe
SB-01358*	Macko et al. 1983	Technical Report
SB-01537	Green 1985	Historic Structures Report for the Yorba Slaughter Adobe
SB-01607	Greenwood et al. 1986	Yorba-Slaughter Adobe
SB-01687*	Whitney-Desautels and Langenwalter II	Archival Research
SB-01688*	Lauter 1987	Ground Truthing Excavations
SB-01794*	Greenwood et al. 1987	Yorba-Slaughter Adobe
SB-01948	Hatheway 1989	Pomona-Rincon Road
SB-01855*	Brock 1989	Historic Records Database
SB-01890	Macko and Weil 1989	Archaeological Assessment
SB-01941*	Hatheway 1989	Archival Research
SB-01942*	Swanson and Hatheway 1989	The Dairy Industry
SB-02059	Infotec	Obsidian studies
SB-02214	McKenna 1990	Archaeological Monitoring
SB-02246	Mason 1990	Test program results
SB-02266	Donnelly 1991	Milling Stone Horizon Context
SB-02424	Swanson 1991	Yorba-Slaughter Adobe
SB-02451	Sturm 1991	Archaeological Assessment
SB-02491	Alexandrowicz 1992	Ancillary Cultural Resource Investigations
SB-02492	Hampson 1992	Yorba-Slaughter Adobe
SB-03008	Mckenna 1995	Cultural Resources Investigation
SB-03014	Foster et al. 1995	Archaeological investigation
SB-03685	Maxon 1997	Archaeological test excavations report
SB-03691	De Barros 1992	Test Investigation report
SB-03692*	Slawson 1998	Cultural Resource Survey
SB-03694	Hammond 1986	Historic Property Survey Report
SB-04344	McKenna 1996	Phase I Archaeological Investigations
SB-04394	Dahdul 2002	Historic property evaluation
SB-04400	Kyle 2002	Cultural Resource Assessment
SB-04401	Hogan 2004	Archaeological/Paleontological Monitoring Report
SB-04403	Dukew 2003	Archaeological Monitoring Report
SB-05285	Jordan and Wilson 2006	Archaeological Survey Report
SB-06070	Jordan and Wilson 2005	Archaeological Survey Report
SB-06426	Schmidt 2009	Deteriorated pole replacement project survey
SB-06557*	No data on file at SCCIC	
SB-06640	No data on file at SCCIC	
SB-06820	Schmidt 2010	Archaeological Letter Report
SB-07083	Gust and Valasik	Paleontological and Cultural Resources Survey

Report Number	Recorder/Year	Type of Study
San Bernardino County		
SB-07444	No data on file at SCCIC	
SB-07446	Tang 2013	Historical/Archaeological Resources Survey
Riverside County		
RI-00060	Leonard and Hall 1975	Cultural Resources Evaluation
RI-00061	Langenwalter and Brock 1985	Phase II Archaeological Studies
RI-00062	Toby, Suss, and Burgess 1977	Historical Resource Survey
RI-01112	Schwartz 1981	Cultural Resources Survey
RI-01817	Greenwood et al. 1983	Historical Resource Evaluation
RI-01954*	Rosenthal and Schwarz 1981	Cultural Resource Survey
RI-02148*	Greenwood et al. 1987	Archaeological Evaluation
RI-02878	Goldberg and Arnold 1988	Cultural Resources Evaluation
RI-02879*	Grenda and Gray 1997	Archaeological Testing
RI-02881*	Greenwood and Foster 1990	Historical Resource Evaluation
RI-02882*	Sterner and Protas 2000	Historical Resource Testing
RI-03904*	Meighan 1984	Archaeological Survey Report
RI-03907	Foster and Toren 1995	Cultural Resources Evaluation
RI-05437	Jordan and Wilson 2005	Archaeological Survey
RI-06855	Pollack 2006	Archaeological Survey
RI-06918*	Jordan and Wilson 2006	Archaeological Survey
RI-08397	Sanka 2010	Cultural Resources Assessment
RI-08605	Goldberg 2010	Archaeological Survey Report
RI-09916	Grenda and Gray 1997	Archaeological Testing
*Included some or all of the focal area		

Mill Creek Focal Area

The SCCIC records search indicates that 14 cultural resource sites have been recorded within a $^{1}/_{8}$-mile radius of the Mill Creek Focal Area (Table 8). Of those, five are located within the focal area boundary, described after the table, and depicted on Exhibit 3, below.

TABLE 8: CULTURAL RESOURCES SITES CONDUCTED WITHIN ONE-EIGHTH MILE OF THE MILL CREEK FOCAL AREA

Site Number	Recorder/Year	Description
San Bernardino County		
CA-SBR-002845*	Wetherbee et al. 2008	Chino-Corona Road Site
P-36-013408*	Dice 2007	historic farm
P-36-013409*	Dice 2007	historic farm
P-36-013412*	Dice 2007	Water conveyance system
CA-SBR-12613H (P-36-13627)*	Sanka et al. 2012	Southern Sierras Powerline
P-36-028586	Yates 2012	Historic building
P-36-060001	Nelson 1975	Prehistoric lithic scatter
Riverside County		
CA-RIV-2754	Brock and Langenwalter 1983	Prehistoric

Site Number	Recorder/Year	Description
San Bernardino County		
CA-RIV-2755	Brock and Langenwalter 1983	Prehistoric
CA-RIV-2803	Langenwalter and Brock 1984	Prehistoric
CA-RIV-2804	Langenwalter	Prehistoric
CA-RIV-4728H	Hampson and Kaptain 1992	Historic
CA-RIV-4730	Sanka 2010	Prado Dam Facility
CA-RIV-5253	Toren 1995	Remnants of farm
*Located in the focal area		

CA-SBR-002845: This site is a light lithic scatter of flaked and groundstone immediately adjacent to Mill Creek. Test excavations in 1985 produced limited artifactual material. No evidence of the site was found during a recent survey (Wetherbee and Larkin 2008). Elevation: 540'-565' amsl.

P-36-013408: The site is the remnants of a small farm built sometime before 1953. Portions of it still appear to be extant on the [redacted]. Elevation 536' amsl.

P-36-013409: This resource is the remnants of the McClean cattle ranch and appear on the 1942 edition of the Corona, CA 1:125,000 topo map. The early structures have been removed and a home and barn are presently at the site. Elevation: 536' amsl.

P-36-013412 (CA-SBR-12573): This site is the remnants of the historic Fuqua Ditch, dating to 1888, that extended along first [redacted] It has been largely destroyed through flooding and filling by sand. Elevation: 545'-555' amsl.

CA-SBR-12613 (36-013627): This resource is a portion of the historical-age Southern Sierras Power Company power line on steel towers that extends into the Focal Area from the west, then due north when it reaches Mill Creek, and again east once around the creek. The resource has been deemed not eligible for listing. Elevation varies.

The SCCIC and EIC Records searches and literature reviews showed that 16 cultural resources studies have been completed within a $^1/_8$ mile radius of the Mill Creek Focal Area (Table 9). Of those, nine included some or all of the project site.

TABLE 9: CULTURAL RESOURCES STUDIES CONDUCTED WITHIN ONE-EIGHTH MILE OF THE MILL CREEK FOCAL AREA

Report Number	Recorder/Year	Type of Study
San Bernardino County		
SB-00530	Hearn 1977	Archaeological Assessment
SB-00665*	Hearn 1978	Archaeological Assessment
SB-01029	Foster and Greenwood 1980	Cultural Resource Overview
SB-01687	Whitney-Desautels and Langenwalter II 1987	Archival Research
SB-01855*	Brock 1989	Historic Records Database
SB-01941*	Hatheway 1989	Archival Research
SB-01942*	Swanson and Hatheway 1989	The Dairy Industry
SB-06267*	Wetherbee et al. 2008	Cultural Resource Inventory
SB-06268*	Wetherbee et al. 2007	Cultural Resource Inventory
Riverside County		
RI-00061*	Langenwalter and Brock 1985	Phase II Archaeological Studies
RI-01666	Wirth Associates 1983	Cultural Resources Technical Report
RI-02129	Moratto 1986	Archaeological Investigation
RI-02148*	Greenwood et al. 1987	Archaeological Evaluation
RI-03904*	Meighan 1984	Archaeological Survey Report
RI-03906	Grenda 1995	Data Recovery Report
RI-03907	Foster and Toren 1995	Cultural Resources Investigation
*Located within the focal area.		

SARM Upstream Focal Area

As identified in Table 10, 23 cultural resources have been recorded within a 1/8th mile radius of the SARM Upstream Focal Area. Of those, 13 are within the focal area, are described after the table, and depicted on Exhibit 3, below..

TABLE 10: CULTURAL RESOURCES SITES RECORDED WITHIN ONE-EIGHTH MILE OF THE SARM UPSTREAM FOCAL AREA

Site Number	Recorder/Year (most recent)	Description/Eligibility
Riverside County		
CA-RIV-0652	No data on file with EIC	
CA-RIV-1039H*	Selverston 1995	Historic
CA-RIV-1042	Hall 1975	Lithic scatter
CA-RIV-1043	Hall 1975	Lithic scatter
CA-RIV-1044H*	Selverston 1995	Pate Ranch
CA-RIV-1451*	Hammond 1977	Prehistoric/historic isolate
CA-RIV-2754	Brock and Langenwalter 1983	Prehistoric
CA-RIV-2755	Brock and Langenwalter 1983	Prehistoric
CA-RIV-2778	Langenwalter and Brock 1984	Serrano House
CA-RIV-2802*	Langenwalter and Brock 1984	Historic
CA-RIV-3372*	Brock 1985	Historic
CA-RIV-3694*	Dittmer 1994	Historic
CA-RIV-3740*	Brock and Elliot 1989	Historic

Site Number	Recorder/Year (most recent)	Description/Eligibility
Riverside County		
CA-RIV-4728H	Hampson and Kaptain 1992	Historic
CA-RIV-4730*	Sanka 2010	Prado Dam Facility
CA-RIV-5523H*	Toren 1995	Remnants of Farm
CA-RIV-5524H*	Toren 1995	Homestead
CA-RIV-5809 (33-7586)*	Brock and Smith 1996	Historic
CA-RIV-7844*(33-014736)**	Duff 2005	Historic
CA-RIV-8400	Minor 2007	Prehistoric site
P-33-006524*	Richie 1983	Historic Site
P-33-012622	Unknown	Prehistoric site
P-33-012900	Schwartz 1981	Prehistoric site
*Recorded within the focal area.		

CA-RIV-1039H: This site is the location of the former Ashcroft Family Ranch located on Pomona Rincon Road east of the spillway. It was deemed eligible for listing in the NRHP after testing (Foster and Toren 1995). [redacted] Elevation: 540' amsl.

CA-RIV-1044H: This site is a former ranch, located approximately [redacted] It was deemed eligible for listing in the NRHP (Sterner et al. 2004). The Feasibility study will potentially affect a small portion of the site – along its western boundary. Elevation: 540' amsl.

CA-RIV-1451: This site is a bifacial mano and historic bottle grass isolate. It was recorded immediately west [redacted]. Elevation: 580' amsl.

CA-RIV-2802: This site is the previous location of an adobe structure dating to the 1880s. It lies down slope and to the north of the eastern [redacted]. Testing in the 1980s resulted in the recovery of glass, porcelain, iron nails, ceramics, animal bone and other refuse. The structure and foundation were not found (Langenwalter and Brock 1984). All remnants of the site are buried under at least one foot of silt. The site will not be affected by the sediment placement [redacted]. Elevation: 505' amsl.

CA-RIV-3372: This site is the defunct town of Rincon's cemetery which contains up to 38 burials. It is located along [redacted]. The site is preserved and is surrounded by a locked fence and gate; however, all surface evidence has been removed. It will be avoided by sediment placement. Elevation: 540' amsl.

CA-RIV-3694H (CA-RIV-3698H): This site is the former site of the town of Rincon. It is located along [redacted]. It has been deemed eligible for listing in the NRHP (Greenwood 1987) and underwent data recovery excavations in 1992 (Foster and Toren 1995). A small portion, at the very southern edge of the site will be covered during the Feasibility Study. Data recovery excavations in this area may be necessary to collect a representative sample of this area of the site prior to it being permanently covered. Elevation: 490-540' amsl.

CA-RIV-3740: This site is the historic location of the Meridith Ranch. All the structures were demolished during the construction of the Prado Dam. The site is no longer present on the project.

It appears to be the same site as CA-RIV-5523, approximately [redacted]. It has been determined not eligible. Elevation: 525' amsl.

CA-RIV-4730H: This site is the Prado Dam and spillway facility. It was determined eligible for listing on the National Register, but no longer considered so after changes to the dam in the 1990s. Elevation: 510' amsl.

CA-RIV-5523H (33-5783): This site is a former farmstead owned and operated by Orin Meridith. It appears to be the same site as CA-RIV-3740, approximately [redacted] It has been determined not eligible. Elevation: 560' amsl.

*CA-RIV-5524H (33-5784)** This site consists of a former homestead dating to the 1890s. It lies down slope and to the north of the [redacted], on a dirt road leading eastward from Pomona-Rincon Road. The structures were removed in the 1940s. The site will not be affected by the sediment placement as it is downslope to the north. Elevation: 520' amsl.

CA-RIV-5809 (33-7586): This site is the former location of a structure located [redacted] It is evidenced by the presence of late 19th/early 20th Century debris recovered during testing (Brock and Smith). No structures were located. Elevation: 530' amsl.

CA-RIV-7844 (33-014736): This is the Johnson Ranch site. It is located approximately 1[redacted] Elevation: 540' amsl.

P-33-006524: This site is the former location of the Good Samaritan Boys home at [redacted] It has been removed and only an open lot remains. It will not be impacted by the project as it is located in a residential community above the Santa Ana River Basin. Elevation: 580' amsl.

The EIC Records search and literature review showed that 40 cultural resource investigations have been conducted within a $^1/_8$-mile radius of the SARM Upstream Focal Area (Table 11). Of those, 17 include all or part of the focal area.

TABLE 11: CULTURAL RESOURCES STUDIES CONDUCTED WITHIN ONE-EIGHTH MILE OF THE SARM UPSTREAM FOCAL AREA

Report Number	Recorder/Year	Type of Study
Riverside County		
RI-00061*	Langenwalter and Brock 1985	Phase II Archaeological Studies
RI-00535	Lowell et al. 1979	Cultural Resources Survey
RI-01111	Schwartz 1980	Cultural Resources Survey
RI-01112*	Schwartz 1981	Cultural Resources Survey
RI-01307*	Peak 1975	Cultural Resources Assessment
RI-01308	Brock and Smith 1996	Archaeological Assessment
RI-01697*	Drover 1982	Archaeological Assessment
RI-01888	Salpas 1984	Archaeological Assessment
RI-01913*	McCarthy 1985	Archaeological Assessment
RI-01954*	Rosenthal and Schwarz 1981	Cultural Resource Survey
RI-02148*	Greenwood et al. 1987	Archaeological Evaluation
RI-02267	Schneider 1988	Archaeological Assessment
RI-02307	Hampson et al. 1988	Cultural Resources Survey
RI-02889*	Swanson and Hatheway 1989	Historical Research

Report Number	Recorder/Year	Type of Study
Riverside County		
RI-02902*	Swanson and Hatheway 1989	Research
RI-03093*	Lerch 1990	Cultural Resources Assessment
RI-03322	The Keith Companies 1988	Historic Property Survey Report
RI-03629*	Seymour and Doak 1992	Archaeological Survey Report
RI-03904*	Meighan 1984	Archaeological Survey Report
RI-03598	Seymour and Doak 1992	Archaeological Survey
RI-03889*	Drover 1993	Environmental Impact Evaluation
RI-04359	Duke 2000	Cultural Resources Assessment
RI-04331	Lerch 1999	Historic Property Survey Report
RI-04926*	Irish et al. 2003	Archaeological and Paleontological Survey Report
RI-05049	McKenna et al. 2003	Archaeological Survey Report
RI-05775	Tang et al. 2002	Archaeological Survey Report
RI-05905*	Tang et al. 2002	Archaeological Survey Report
RI-05964	Tang et al. 2003	Archaeological Survey Report
RI-06085	Sterner et al. 2004	Data Recovery Report
RI-06194	Tang et al. 2004	Historical/Archaeological Resources Survey Report
RI-06856	Duff 2006	Historical Resource Eligibility Testing
RI-07448	Ciolek-Torrello et al. 2007	Emergency Data Recovery
RI-08171	Sanka and Kay 2008	Cultural Resources Assessment
RI-08397	Sanka 2010	Cultural Resources Assessment
RI-08519	Tang et al. 2004	Historical/Archaeological Resources Survey Report
RI-08605	Sanka 2010	Cultural Resources Assessment
RI-08761	Tang et al. 2012	Historic Properties Evaluation
RI-08805*	Orfila 2012	Archaeological Survey Report
RI-08817	Tang et al. 2013	Historical Property Evaluation
RI-08921*	Tang 2013	Historical Property Evaluation
RI-08988	Bupp 2013	Archaeological Survey Report
*Recorded within the focal area.		

SARM Downstream Focal Area

The SCCIC and EIC records searches and literature reviews showed that 22 cultural resource sites have been recorded within a 1/8th mile radius of the SARM Downstream Focal Area (Table 12). Of those, two are within the focal area boundary, are described after the table, and depicted on Exhibit 3, below..

TABLE 12: CULTURAL RESOURCES SITES RECORDED WITHIN ONE-EIGHTH MILE OF THE SARM DOWNSTREAM FOCAL AREA

Site Number	Recorder/Year	Description
Orange County		
CA-ORA-000614*	Hall 1975	Lithic scatter
CA-ORA-000615	Desautels 1975	Lithic scatter, rockshelter

Site Number	Recorder/Year	Description
CA-ORA-000617	Brown 1994	Lithic scatter, quarry
CA-ORA-000647	Brown 1994	Lithic scatter, quarry
CA-ORA-000648	Brown 1994	Lithic scatter
CA-ORA-000755	York and Mullen 1996	Lithic scatter
CA-ORA-000756	Beck and Allen 1996	Lithic scatter
CA-ORA-000758	Beck and Allen 1996	Lithic scatter
CA-ORA-000759	Beck and Allen 1996	Lithic scatter
CA-ORA-000780	York and Mullen 1996	Lithic scatter
CA-ORA-000817*	Douglas 1979	Lithic scatter, habitation debris
CA-ORA-001073	Desautels 1983	Lithic scatter
CA-ORA-001074	Desautels 1983	Lithic scatter
CA-ORA-001075	Desautels 1983	Lithic scatter, groundstone
CA-ORA-001076	Desautels 1983	Lithic scatter
CA-ORA-001358	Cottrell 1988	Lithic scatter
CA-ORA-001484H	Maxon 1996	Historic residence
CA-ORA-001660	Holmes and Vader 2006	Lithic scatter
CA-ORA-001741	Bissell 1986	Lithic scatter
CA-ORA-1478	White 1994	lithic scatter
Riverside County		
CA-RIV-5222H	Toren 1995	Remnants of Railroad Bridge
CA-RIV-4730	Sanka 2010	Prado Dam Facility
*Recorded within the focal area.		

CA-ORA-000614: This site is a sparse lithic scatter on the north side of the Santa Ana River [redacted]. Elevation: 385' amsl.

CA-ORA-000817: This site is an artifact scatter of flaked and ground stone tools on a river terrace in the [redacted] within the Santa Ana River valley. Most of the artifacts have been removed. According to the site record, it is the possible location of the Peralta Adobe (Nelson 1979). Elevation: 340' amsl.

The SCCIC and EIC records searches and literature reviews showed that 36 cultural resources studies have been completed within a 1/8th mile radius of the SARM Downstream Focal Area (Table 13). Of those, four include all or part of the focal area .

TABLE 13: CULTURAL RESOURCES STUDIES CONDUCTED WITHIN ONE-EIGHTH MILE OF THE SARM DOWNSTREAM FOCAL AREA

Report Number	Recorder/Year	Type of Study
Orange County		
OR-00270	Nelson and Hall 1975	Evaluation of Cultural Resources
OR-00422	Desautels and Zelenka	Archaeological Report on ORA-615
OR-00426	Mabry 1979	Weir Ranch Shopping Center Survey
OR-00598	Anonymous	Evaluations for ORA-817, ORA-818, ORA-819, and ORA-820
OR-00605	Unknown 1980	Archaeological Survey Report
OR-00642	LSA 1982	Archaeological Assessment

Report Number	Recorder/Year	Type of Study
OR-00752	Mason 1984	Eastern Corridor Alignment Study
OR-00759	Anonymous 1983	Survey Report Bryant Ranch
OR-00768	Unknown 1985	Cultural Resources Survey
OR-00801	Langenwalter and Brock 1985	Phase II Evaluations Santa Ana River
OR-01066	Desautels and Whitney 1977	Archaeological Assessment Bryant Ranch
OR-01561	Becker 1997	Cultural Resource Survey Yorba Linda
OR-01585	Maxon 1997	Cultural Resources Survey Bryant Ranch
OR-01596	Clewlow 1974	Archaeological Survey
OR-01729	Martz 1975	Archaeological Survey
OR-01877	White and White 1995	Bryant Ranch Study
OR-01878	Mason 1983	Bryant Ranch History
OR-02074	Bissell 1999	Monitoring Report Cajon Canal
OR-02257	Laska 2001	Cultural Resource Assessment
OR-02573	Duke 2002	Cultural Resource Assessment
OR-03292	Shepard 2002	unknown
OR-03474	Bonner 2007	Cultural Resource Assessment
OR-03601	McLean and Underbrink 2007	Historic Property Survey Report for State Route 91
OR-03668	Bonner 2007	Cultural Resource Assessment
OR-03925	Bonner 2010	Cultural Resource Assessment
OR-04092	Fulton et al. 2009	SARI EIR
OR-04183	Bonner 2011	Cultural Resource Assessment
Riverside County		
RI-01666	Wirth Associates 1983	Cultural Resources Technical Report
RI-03322	The Keith Companies	Historical Property Survey Report
RI-07494	Underbrink 2006	Historical Property Survey Report
RI-08397	Sanka 2010	Cultural Resources Assessment
RI-08238*	Maxwell 1993	Technical Report
RI-08536*	Tang et al. 2010	Phase 3 Expansion Report
RI-08605*	Goldberg 2010	Archaeological Survey Report
RI-08897*	Goodwen 2012	Cultural Resource Assessment Report
RI-08989	Chasteen 2013	No Adverse Effect Report
*Recorded within the focal area.		

7.2 PEDESTRIAN RECONNAISSANCE SURVEYS

Pedestrian reconnaissance surveys and a windshield survey of portions of the focal areas at Prado were conducted in 2015 and in 2018 on three separate occasions by David Smith and Patrick Maxon as part of the Feasibility Report study.

Initial pedestrian reconnaissance surveys were undertaken by Mr. Smith and Mr. Maxon in 2015 to inspect four revegetation areas in the Chino and Mill Creek Focal Areas as well as to examine portions of the SARM Downstream Focal Area. They were inconclusive.

A reconnaissance survey of the Sediment Storage Site and four Focal Areas was undertaken by Mr. Maxon on two occasions in 2018. On January 4, 2018 Mr. Maxon undertook a reconnaissance survey of the proposed Sediment Storage sites and associated archaeological sites with OCWD

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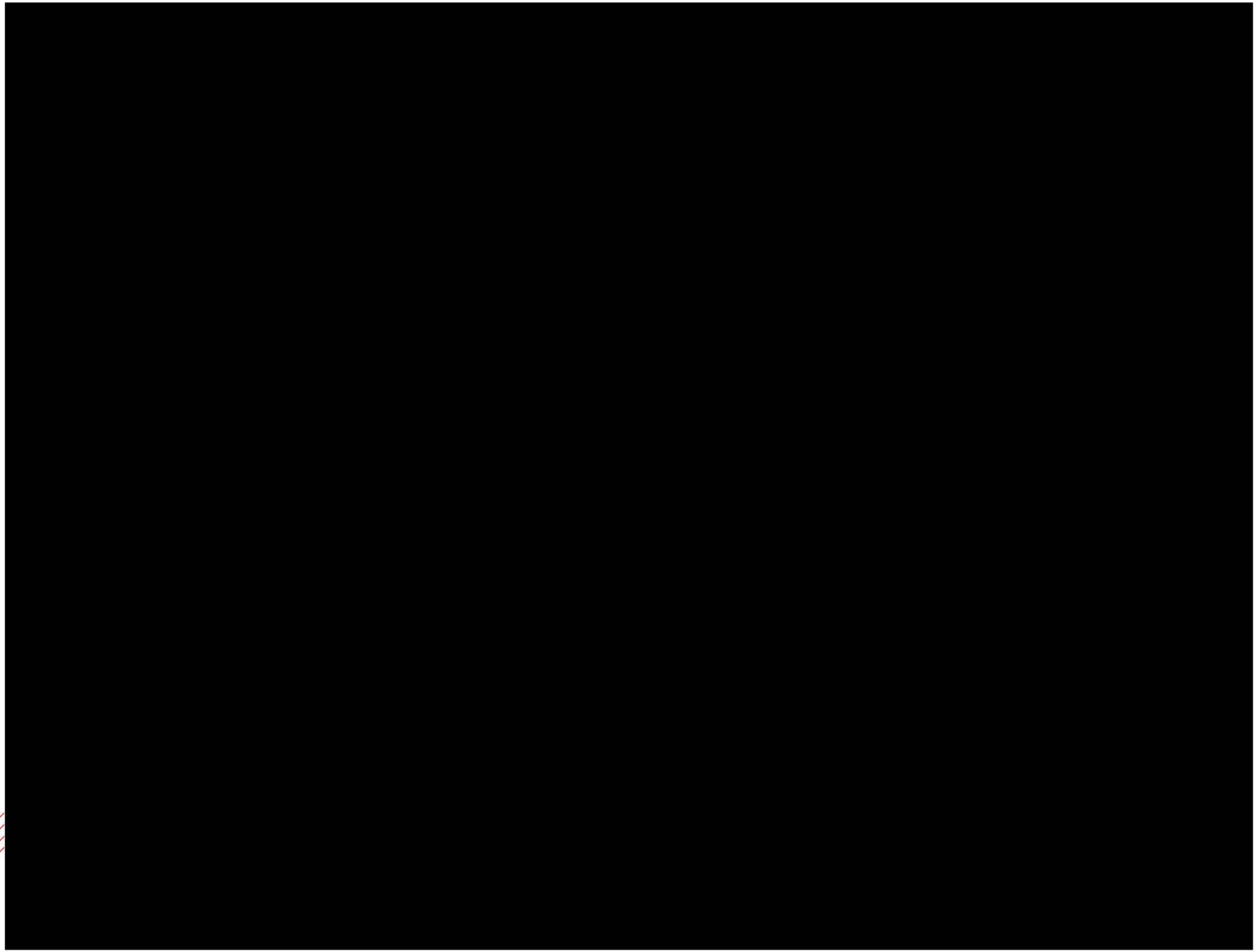

Field Biologist Bonnie Johnson. Although covered in vegetation, we were able to visit each location and gauge existing conditions. On May 3, 2018 Mr. Maxon again met Bonnie Johnson, at the OCWD field office and spent a full day driving and walking the accessible portions of the four Focal Areas in the Prado Basin to determine existing conditions, vegetation coverage, and the status of cultural resources (if possible) within each of the four Focal Areas. Our observations as a result of these reconnaissance surveys are as follows:

Sediment Storage Sites: This site consists of two Sediment Storage Sites separated into east and west storage sites divided by the northwest/southeast trending Auto Center Drive. The eastern storage site is mostly covered in dried grasses and scrub and is bisected by a north/south trending drainage. [redacted] he western storage site is similarly covered in dried grasses and scrub and bisected by a divided drainage. Thicker riparian vegetation exists in this drainage than that in the eastern storage area. [redacted]

Chino Creek Focal Area**:** The northernmost portion of the APE is a channelized, soft-bottom section of the creek, beginning at Central Avenue and extending in a southeast direction through a residential neighborhood to the west and commercial development to the east (immediately north of Central Avenue the creek has a concrete bottom and sides). Further south, near Pine Avenue and the El Prado Golf Course, the creek reverts to a natural state, with dense vegetation dominating the APE from this point south, approximately four miles to the dam. Portions of the OCWD constructed wetlands are within the APE, approximately 1 mile north of the dam.

Mill Creek Focal Area: Where Mill Creek transitions from a channelized, concrete bottom stream to a soft bottom, meandering creek, at Hellman Avenue, the APE follows the creek and adjacent parcels along the vegetated creek bottom and riparian vegetation along the banks. Immediately south of the northern end of the APE, the Mill Creek Preserve gives way to plowed fields on the western side of the creek; however, the remaining 2.7 miles of creek from the Edgewater area to Mill Creek's confluence with Chino Creek, approximately 1.5 miles north of the dam, is a heavily vegetated riparian corridor. The southern reaches of the Mill Creek APE includes portions of the constructed wetlands just upstream of the dam.

SARM Upstream Focal Area: This Focal Area consists of a portion of the main Santa Ana River system from Hamner Avenue west of the I-15 Freeway to the north, down to the dam. The upper three miles of the river within the APE are heavily vegetated with riparian plants and many areas of Arundo that obscures much of the surface and prevents access to many areas. Where the river crosses River Road, half of the river's flow is diverted to the west, where it feeds the OCWD constructed wetlands just upstream of the dam. The entire wetlands area is within the APE, a portion is also in the Mill Creek Focal Area. The southern approximately three miles of the river extend through the densely vegetated forested area approaching the dam.

SARM Downstream Focal Area: This segment, approximately 7 miles long from the dam, west north of and along State Route (SR) 91 to Yorba Linda Boulevard, consists largely of a segment of the Santa Ana River that is constrained by SR 91, commercial, and residential developments to the south and a golf course, commercial and residential developments to the north. The survey consisted of a windshield survey of the entire length of the Focal Area, making stops at bridges and other locations where possible to gain an overview of the APE. Much of this Focal Area is submerged during spring rains each year, but currently the river is a small stream with riparian vegetation along its length.

7.3 NATIVE AMERICAN CORRESPONDENCE

Native American scoping, pursuant to the requirements of Assembly Bill (AB) 52, was completed by the OC Water District and is not a part of this study.

8.0 EFFECTS ANALYSIS

This effects analysis is provided to assist the USACE and OCWD in fulfilling its compliance responsibilities under the National Environmental Policy Act (NEPA). Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (see *Code of Federal Regulations* [CFR], Title 36, Section 800) were used to identify historic properties within the APE. The criteria of adverse effects codified at 36 CFR 800.5 are used to assess the effects of the proposed project on the five mitigation sites.

8.1 ASSESSMENT OF EFFECTS

The pedestrian reconnaissance survey included a spot check of portions of the four focal areas and the Sediment Storage Sites area. The reconnaissance survey for all of the areas was inconclusive because of vegetation, disturbance, development, and inaccessibility to certain areas based on the limited nature of the survey. Although no known archaeological sites were discovered during the field surveys, because of the known presence of archaeological sites in the area, there is a potential for currently unknown cultural resources to be uncovered during excavation and restoration activities on the sites or if site areas are flooded, and there may be impacts to four archaeological sites at the Sediment Storage Sites. Potential adverse effects to such resources, if eligible for listing on the National Register of Historic Places, would be considered significant. The nature of the project efforts (water conservation, wildlife and plant management, etc.) and the ground disturbance of colluvial sediments during the sediment management efforts, makes it unlikely that buried resources will be uncovered during project activities in any areas other than the Sediment Storage Sites. The known sites within each of the four focal areas that might be inundated to the 505' level have already been impacted by floodwaters in the past and will suffer no additional adverse effects as a result of the planned water conservation efforts.

[redacted]. The following recorded sites could be affected by the project (refer to Exhibit 2):

CA-RIV-5523H

A former poultry farm and ranch, [redacted]. It has previously been evaluated by Greenwood and Associates and deemed not eligible for listing in the NRHP (Foster and Toren 1995). No additional archaeological investigations are necessary at this site.

CA-RIV-1039H

The former Ashcroft Family Ranch underwent testing in 1995 (Foster and Toren 1995) and was deemed eligible for listing in the NRHP. The testing revealed that subsurface components remain preserved under the top 50 centimeters agricultural plow zone and extend down to at least 140 centimeters. Data recovery excavations were completed by Statistical Research (Sterner et al. 2004) with the understanding that the site would be completely destroyed by the Sediment Storage Site work. Therefore, data recovery excavations in anticipation of the sediment storage work have already been completed as described above and no additional archaeological investigation is necessary.

CA-RIV-1044H

This former ranch underwent testing in 1995. It was deemed eligible for listing in the NRHP. Data Recovery excavations were undertaken in 2004 (Sterner et al. 2004) in anticipation of the site being destroyed [redacted] additional data recovery excavations is not necessary.

CA-RIV-3694H (3698H)

This site, the former site of the town of Rincon has been deemed eligible for listing in the NRHP (Greenwood 1987) and underwent focused data recovery excavations in 1992 (Foster and Toren 1995) as mitigation for impacts associated with the water conservation pool being raised to 505 feet elevation. [redacted]. Data recovery excavations in this area may be necessary to collect a representative sample of this area of the site prior to it being permanently covered.

In the event that unknown resources are uncovered during the project, the OCWD must comply with 36 CFR 800.13, which requires additional mitigation measures as developed in consultation with the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP).

RECOMMENDED CULTURAL RESOURCE MEASURES

Cult-1 If eligible archaeological site CA-RIV-3694H will be [redacted], data recovery excavation of those areas of the site effected by the project would be necessary.

Cult-2 A qualified Archaeologist should be retained to conduct monitoring as necessary during ground-disturbing activities such as vegetation removal, grading, and other excavations related to the Feasibility Report study. The Archaeologist should be present at the pre-grade conference and should establish a schedule for archaeological resource surveillance based on the nature of planned activities. The Archaeologist should establish, in cooperation with OCWD, procedures for temporarily halting or redirecting work, if any is ongoing, to permit the sampling, identification, and evaluation of cultural resources as appropriate. If the archaeological resources are found to be significant, the Archaeological Monitor should determine appropriate actions, in cooperation with OCWD, for exploration and/or salvage. Significant sites that cannot be avoided will require data recovery measures and shall be completed upon approval of a Data Recovery Plan.

REGULATORY REQUIREMENT

RR Cult-1 Project-related earth disturbance has the potential to unearth previously undiscovered human remains, resulting in a potentially significant impact. If human remains are encountered during excavation activities, all work shall halt and the County Coroner shall be notified (*California Public Resources Code,* Section 5097.98). The Coroner will determine whether the remains are of forensic interest. If the Coroner determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and*

Safety Code. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code,* Section 7050.5). If the landowner rejects the MLD's recommendations, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code,* Section 5097.98).

Compliance with Section 5097.9 of the *California Public Resources Code* would preclude significant impacts to human remains.

9.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this cultural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: October 2018 SIGNED:

Patrick O. Maxon, M.A., RPA
Director – Cultural Services

10.0 REFERENCES

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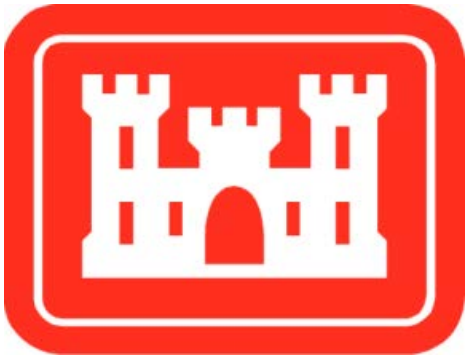
Appendix I

Cultural Resources

Part 2: SHPO and Tribal Consultation Letters



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

August 1, 2018

Planning Division

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Dear Ms. Polanco:

The U.S. Army Corps of Engineers, Los Angeles District (Corps) has partnered with the Orange County Water District (OCWD) as the non-Federal sponsor to study and evaluate opportunities to both increase water conservation at the Prado Dam located in the City of Corona, Riverside County, California and to restore the quality and function of aquatic, riparian, and transitional habitats within portions of the larger Santa Ana River watershed. The study is being conducted as part of the Corps' General Investigation program and was authorized by the Water Resources Development Act of 1986. The purpose of the feasibility study is to identify, evaluate and recommend a preferred alternative to Corps decision makers and ultimately Congress. The study will culminate in the completion of an Integrated Feasibility Report which will also serve as the Environmental Impact Statement/Environmental Impact Report and will include a feasibility level design of the recommended project. Construction level designs and additional environmental compliance activities will be completed in future design phases if the recommended project is approved by Congress. Through the study process, the Corps and OCWD have identified a series of ecosystem restoration measures that could be implemented within four focal areas within the basin and in the Santa Ana River downstream of Prado Dam (enclosure 1). Specific ecosystem restoration measures include: sediment management, channel restoration, native plantings, invasive plant management, riparian edge treatment, instream habitat features, and non-native wildlife management. The study has also identified a measure to change the operation of the dam to impound more water and then release stored water in a controlled manner to optimize recharge of aquifers associated with downstream reaches of the Santa Ana River. In accordance with 36 C.F.R. § 800.4(a)(1), the Corps has reviewed the undertaking and determined that it is the type of undertaking that has the potential to affect historic properties. This letter provides a brief description of the potential measures and documents the area of potential effect (APE) for the study. By this letter the Corps requests your comments on the appropriateness of the APE.

Study Purpose and Need

Since Prado Dam was constructed in 1941, flood control practices coupled with population growth and its associated development in the watershed have led to changes in ecological processes and an overall reduction of habitat extent and quality. Furthermore, the vulnerability of water supplies from the State Water Project and the Colorado River due to multi-year

droughts has underscored the need for additional reliable sources of water for southern California. The Corps in cooperation with OCWD has developed a series of measures to improve habitat in the study area while simultaneously maximizing water conservation and cost savings for OCWD as a public supplier for metropolitan Orange County.

Project Location and Description

The study area lies within the Santa Ana River Watershed and encompasses most of the Prado Dam Basin and extends downstream along the Santa Ana River for seven miles. While the feasibility study considers impacts of potential measures within the entire study area, the study team further refined the project area into four focal areas where the measures would be implemented (enclosure 2). The four focal areas include two small creeks, Chino Creek and Mill Creek, that feed into the Santa Ana River, a seven mile stretch of the Santa Ana River Mainstem downstream of the dam (SARM downstream), and a six mile segment of the Santa Ana River Mainstem upstream of the dam (SARM upstream). Specific measures that may occur within each focal area, depending on the alternative plan eventually selected, are discussed below.

Water Conservation (SARM upstream)

Under the water conservation measure, the Corps would amend the current Prado Dam Water Control Manual to allow an increase in the water surface elevation of the buffer pool during the flood season (October 1st to February 28/29th), from 498'to 505' for water conservation purposes. Water conservation is already authorized to the 505' elevation during the non-flood season (March 1st thru September 30th). Under this measure, there would be no changes to the non-flood season pool levels. During the flood season, water levels are often held above 498 feet, but its purpose is for flood control not water conservation. Without the proposed modification, flood waters are released as rapidly as possible to draw the pool down to the 498 foot elevation during the flood season. With the proposed modification, flood waters would be retained up to the 505 elevation and released more slowly, allowing more water to be captured in OCWD's recharge facilities downstream of the dam. The seven foot area between 498 and 505 feet has been seasonally submerged since the dam was constructed in 1941 with the potential for higher inundation levels to occur up to 556 feet during major storm events. Planned modifications to the dam's spillway (authorized as part of the Corps' Santa Ana River Mainstem Project, separate from this feasibility study) would allow for flood storage up to 566 feet. Additionally, the Water Conservation Measure includes a permanent reduction on the average outflow release rate from Prado Dam from March 1st to August 30th from 500 cfs to 350 cfs to maximize groundwater recharge potential.

Sediment Management (SARM Upstream and Downstream)

Prado Dam acts as a barrier to natural transport of sediment to the lower Santa Ana River. Under this measure, sediment would be removed from Prado Basin and re-entrained into the lower Santa Ana River below the dam. In order to capture the sediment, an entrainment groin would guide the Santa Ana River stream flow into a trapezoidal earthen transition channel which in turn would move the water and sediment into the sediment trap, from which sediment would be regularly removed either through dredging or dry excavation, depending on the water level at the time. The transition channel would also include three fill areas where material would be placed to provide for the design gradient.

After being removed, the sediment would be piped or hauled to two sediment storage sites where the sediment would be mixed into a slurry. The slurry would be pumped around the Auxiliary Dike of the Prado Dam and then discharged at the end of the downstream outlet channel structure. Pumps would be used to deliver the slurry via two 24-inch diameter pipes over a length of 2,600 feet each. Using the sediment trap, Approximately 2,552,000 cubic yards of material would be removed from Prado Basin over a 50 year period. During years 2 to 5, a total of approximately 1,149,652 cubic yards would be re-entrained and during years 6 to 50, approximately 600,000 cubic yards of material would be re-entrained annually into the lower Santa Ana River. Of all the measures, the sediment management features would require the most ground disturbance. The area where the entrainment groin, transitional channel, and sediment trap would be placed has accumulated up to 25 feet of sediment since the dam was constructed in 1941 and archaeological sites are unlikely to be present at these locations. The sediment storage areas and pipelines are outside of this accumulation of sediment and have a higher likelihood of encountering intact cultural resources.

Chino Creek Channel Restoration (Chino Creek)

This measure involves the construction of a new shallow channel along the west side of Chino Creek between Euclid Avenue and Pine Avenue. The shallow channel would promote riparian habitat growth over areas that currently do not receive enough water to support riparian habitat. A portion of Chino Creek would be filled in order to force the water into the new shallow channel. This measure includes the construction of a diversion pipe and bio-engineered invert stabilizers and would have an overall construction footprint of 170 acres.

Invasive Plant Management (All Focal Areas)

This measure involve the use of herbicides, hand tools and mechanized equipment to remove the biomass of invasive plants. A total of approximately 390 acres of invasive plants would be removed across all four focal areas: approximately 248 acres of invasive plants would be removed from the SARM upstream focal area, 14 acres from the SARM downstream focal area, 69 acres from the Chino Creek focal area and 59 acres from the Mill Creek focal area. Not all areas to be treated for removal of non-native plants would be treated at the same time. A phased approach to implementation would have to be used given the areal extent and density of non-native plants present within the areas identified for management. The measure also includes the planting and management of native species to promote the re-establishment of native vegetation communities in areas that have been treated to remove invasive plants. Due to the size of the focal areas and minimal ground disturbance associated with this measure, it is anticipated that any adverse impacts to cultural resource can be avoided.

Native Plantings (SARM Upstream, Chino Creek and Mill Creek)

The native plantings measure would be carried out at locations identified for restoration of native vegetation where minimal removal of invasive plants would be required prior to revegetation with native plants. Plantings would include seeding, pole staking, and planting of nursery-grown plants at areas that have reduced vegetative cover. Over the three focal areas, approximately 104 acres of area would be cleared and planted with native plantings. Approximately 43 acres of native plantings would occur at the SARM Upstream focal area, 44 acres at the Chino Creek focal are and 17 acres at the Mill Creek focal area. Each site would require some site preparation, but it would be expected to be minimal in comparison to the

invasive plant management measure. Site preparation would be expected to include minor grading and a minimal amount of weed management. As with the invasive plant management measure, it is anticipated that any adverse effects to cultural resources can be avoided.

Riparian Edge Management (SARM Upstream)

This measure involves invasive plant removal, native plantings, vegetation trimming and maintenance to maintain a thriving riparian edge habitat for neo-tropical migratory birds and to provide a buffer to more interior habitats from potential road effects. Riparian edge management would be conducted along the proposed sediment removal trap channels and OCWD diversion channel. Approximately 44 acres of new riparian edge habitat would be created.

In-Stream Habitat Features (SARM Upstream)

In-stream habitat features would be composed of approximately 15 rock groins, measuring 10 ft. x 45 ft. (450 sq. ft.), that would be intended to create localized pools and exposing of existing gravel beds and cobbles that are presumed to be buried under a lens of sand. The SARM upstream in-stream habitat features would be located within the transitional channel leading towards the sediment trap. These features would be located within the stream bed where cultural resources are unlikely to occur.

In-Stream Habitat Features (SARM Downstream)

At the SARM downstream focal area, 15 in-stream habitat features, measuring 70 ft. x 100 ft. (7,000 sq. ft.) each would be constructed. These features would induce upstream sediment deposition and localized downstream scour. These features would expose coarser grained sediment in localized scour areas to serve as fish habitat, and would also sequester sediment that is being re-entrained downstream as a part of the sediment management measure to help combat observed and expected channel incision. As with the upstream habitat features measure, the features would be located within the stream bed where cultural resources are unlikely to occur.

Non-Native Wildlife Management (SARM Upstream, SARM Downstream, Chino Creek, and Mill Creek)

The study has also identified several measures to address the presence of non-native wildlife species that adversely impact native species. These measures include cowbird trapping, the removal of large predatory fish through netting, seining, or electrofishing, and the removal of feral pigs through a combination or trapping, telemetry and other population control techniques. These measures are not expected to affect cultural resources.

Area of Potential Effect

The Corps has defined the APE as the study area for the feasibility project which approximately follows the planned 566' flood storage capacity elevation within the Basin, and the seven mile reach of river downstream of Prado Dam. While implementation of ground disturbance will be limited to the four focal areas, further project refinements could expand beyond their current boundaries. The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects (enclosure 3).

Summary

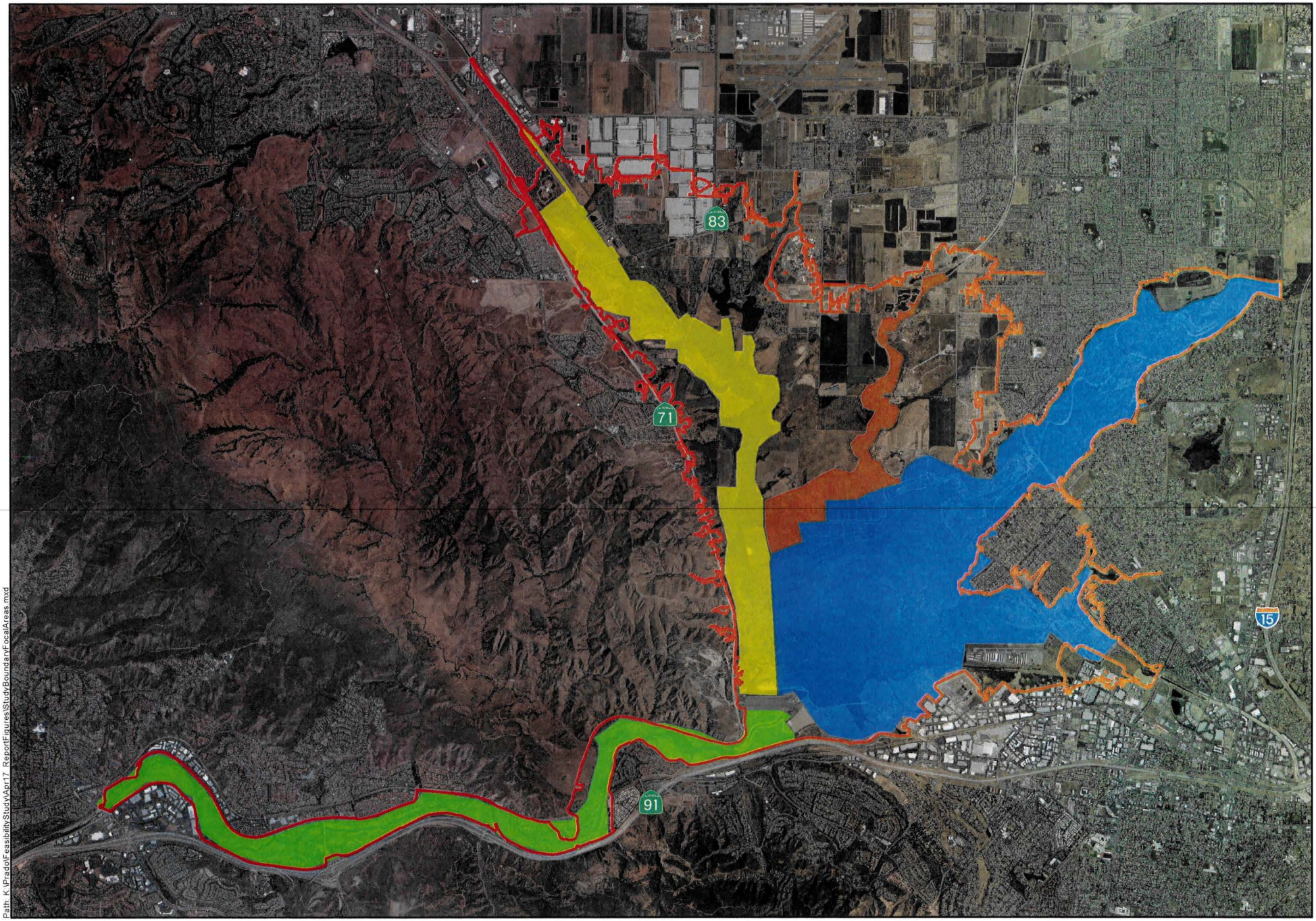
The Corps and OCWD have identified preliminary measures that would effectively address some key issues within the basin. These measures are being packaged into alternatives that will be evaluated. A draft Integrated Feasibility Report is being prepared and will be sent to you for your information within the next few months. The Corps will continue to engage with you regarding our responsibilities under Section 106 of the National Historic Preservation Act throughout this process.

By this letter, the Corps requests your comments on the appropriateness of the APE for the proposed undertaking. The Corps notified the Tribes listed on the Native American Heritage Commission list (Enclosure 4), via a letter dated June 4, 2018, and requested their assistance identifying properties which may be of religious or cultural significance. The Corps would appreciate any comments you may have on the appropriateness of our APE and/or any comment you have on the project at your earliest convenience or within 30 days. If you have any questions, please contact Ms. Danielle Storey, Archaeologist via phone at (213) 452-3855 or via email at Danielle.L.Storey@usace.army.mil.

Sincerely,

Eduardo T. De Mesa
Chief, Planning Division

Enclosure(s)



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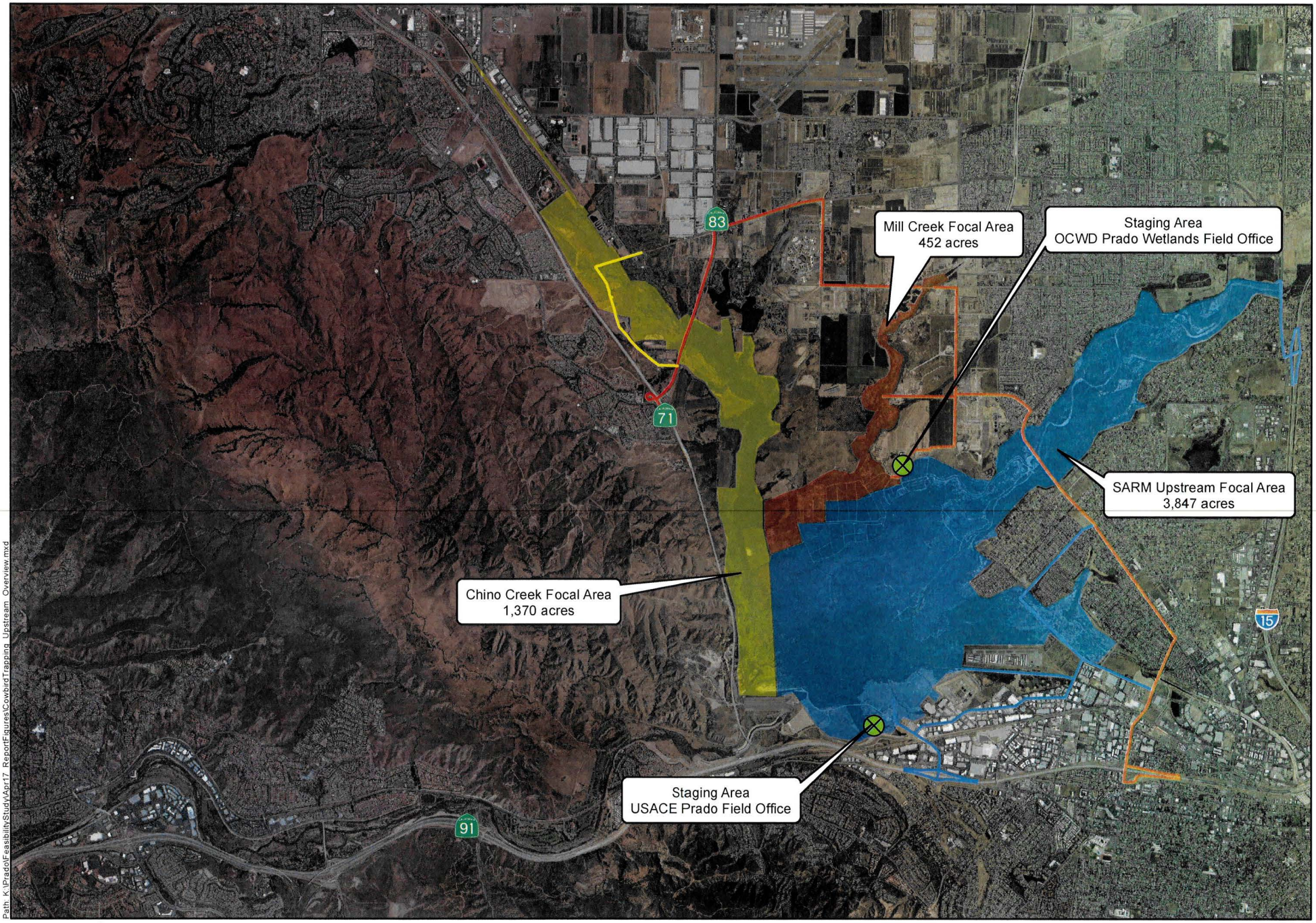
Chino Creek
Mill Creek
Study Boundary
SARM Down Stream
SARM Up Stream

Prado Basin Feasibility Report
Study Boundary & Focal Areas

Figure 2

Enclosure 1



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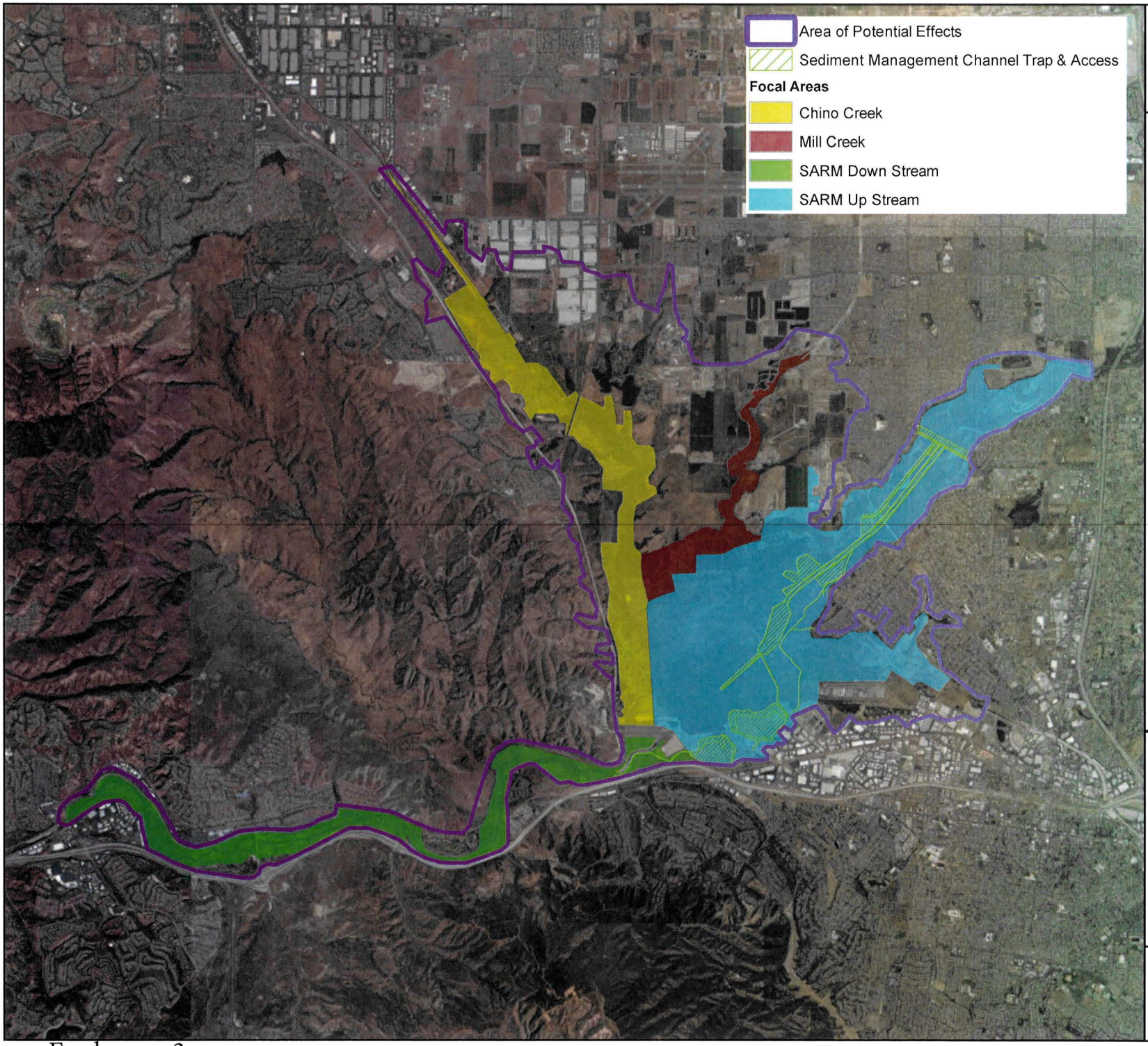
Enclosure 2

Prado Basin Feasibility Report
Cowbird Trapping Areas

Figure 20



Orange County Water District

PRADO BASIN: Area of Potential Effects

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1 in = 7,500 ft

Map Date: April 2018
Data Source: OCWD, ESRI

Enclosure 3

Native American Heritage Commission
Native American Contact List
Riverside, San Bernardino, Orange Counties
5/7/2018

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Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
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Gabrielino /Tongva Nation
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Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
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Bellflower, CA, 90707
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Gabrielino-Tongva Tribe
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Jamul Indian Village
Erica Pinto, Chairperson
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Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
mohusky@jiv-nsn.gov

Juaneno Band of Mission Indians
Sonia Johnston, Chairperson
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Santa Ana, CA, 92799
sonia.johnston@sbcglobal.net

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Prado Basin Feasibility Study Project, Riverside, San Bernardino, Orange Counties.

Native American Heritage Commission
Native American Contact List
Riverside, San Bernardino, Orange Counties
5/7/2018

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Matias Belardes, Chairperson
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State of California • Natural Resources Agency Edmund G. Brown Jr., *Governor*

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September 04, 2018

In reply refer to: COE_2018_0806_001

Mr. Eduardo T. De Mesa
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017

Subject: Section 106 Consultation for the Prado Dam Ecosystem Restoration Feasibility Study, Santa Ana River watershed, California

Dear Mr. De Mesa:

The California State Historic Preservation Officer (SHPO) received a letter from the U.S. Army Corps of Engineers (COE) on August 06, 2018 initiating consultation on the above referenced project in order to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended) and its implementing regulations at 36 CFR Part 800. The COE is requesting comments on their Area of Potential Effect (APE) for the Prado Dam Ecosystem Restoration Feasibility Study located within the City of Corona, Riverside County, California and the greater Santa Ana River watershed. In addition to the letter, the COE provided APE maps and a list of potentially interested tribes provided by the Native American Heritage Commission (NAHC).

The COE has partnered with the Orange County Water District (OCWD) as the non-Federal sponsor to study measures to increase water conservation at the Prado Dam and to restore aquatic, riparian, and transitional habitats within the Santa Ana River watershed, as authorized under the Water Resources Development Act of 1986. The COE is implementing a feasibility study to identify a preferred alternative for the restoration project, which will culminate in the completion of an Integrated Feasibility Report. Additional compliance activities and construction level designs will be completed if the recommended project is approved by Congress.

The ecosystem restoration measures that will be included in the feasibility study include: sediment management, channel restoration, native plantings, invasive plant

management, riparian edge treatment, instream habitat features, non-native wildlife management, and changes in the operation of Prado Dam.

The study area encompasses most of the Prado Dam Basin and extends downstream along the Santa Ana River for seven miles. The COE has defined the APE as the study area for the feasibility project, which approximately follows the planned 566' flood storage capacity elevation within the Basin, and the seven mile reach of river downstream of Prado Dam. Within the APE, the COE has identified four "focal areas" where the specific measures would be implemented, including two small creeks that feed into the Santa Ana River (Chino Creek and Mill Creek), a seven mile stretch of the Santa Ana River Mainstem downstream of the dam (SARM downstream), and a six mile segment of the Santa Ana River Mainstem upstream of the dam (SARM upstream).

The COE is requesting comments on their APE and will continue consultation on the draft Integrated Feasibility Report. At this time, the SHPO has no comments on the APE.

I look forward to continuing consultation with the COE for this undertaking under 36 CFR Part 800. For more information or if you have any questions, please contact Koren Tippett at (916) 445-7017 or koren.tippett@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
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(916) 373-3710

May 7, 2018

Danielle Storey
U. S. Army Corps of Engineers

Sent by E-mail: Danielle.l.storey@usace.army.mil

RE: Proposed Prado Basin Feasibility Study Project, near the City of Corona; Prado Dam USGS Quadrangle, Riverside, Orange, and San Bernardino Counties, California

Dear Ms. Storey:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
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5/7/2018

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DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
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June 4, 2018

Planning Division

Ms. Angela Elliott Santos
Chairperson
Manzanita Band of Kumeyaay Nation
P.O. Box 1302
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Dear Chairperson Elliott Santos:

The U.S. Army Corps of Engineers, Los Angeles District (Corps) has partnered with the Orange County Water District (OCWD) as the non-Federal sponsor to study and evaluate opportunities to both increase water conservation at the Prado Dam located in the City of Corona, Riverside County, California and to restore the quality and function of aquatic, riparian, and transitional habitats within portions of the larger Santa Ana River watershed. The study is being conducted as part of the Corps' General Investigation program and was authorized by the Water Resources Development Act of 1986. The purpose of the feasibility study is to identify, evaluate and recommend a preferred alternative to Corps decision makers and ultimately Congress. The study will culminate in the completion of an Integrated Feasibility Report which will also serve as the Environmental Impact Statement/Environmental Impact Report and will include a feasibility level design of the recommended project. Construction level designs and additional environmental compliance activities will be completed in future design phases if the recommended project is approved by Congress.

Through the study process, the Corps and OCWD have identified a series of ecosystem restoration measures that could be implemented within four focal areas within the basin and in the Santa Ana River downstream of Prado Dam (enclosure 1). Specific ecosystem restoration measures include: sediment management, channel restoration, native plantings, invasive plant management, riparian edge treatment, instream habitat features, and non-native wildlife management. The study has also identified a measure to change the operation of the dam to impound more water and then release stored water in a controlled manner to optimize recharge of aquifers associated with downstream reaches of the Santa Ana River. In accordance with 36 C.F.R. § 800.4(a)(1), the Corps has reviewed the undertaking and determined that it is the type of undertaking that has the potential to affect historic properties. This letter provides a brief description of the potential measures and documents the area of potential effect (APE) for the study. By this letter the Corps requests your comments on the appropriateness of the APE. The Corps would also like to request your assistance in identifying any issues or concerns the Tribe might have and seek information to identify properties that may be affected by the project and which may be of religious or cultural significance to the Tribe (see 36 CFR 800.4(a)(4)).

Study Purpose and Need

Since Prado Dam was constructed in 1941, flood control practices coupled with population growth and its associated development in the watershed have led to changes in ecological processes and an overall reduction of habitat extent and quality. Furthermore, the vulnerability of water supplies from the State Water Project and the Colorado River due to multi-year droughts has underscored the need for additional reliable sources of water for southern California. The Corps in cooperation with OCWD has developed a series of measures to improve habitat in the study area while simultaneously maximizing water conservation and cost savings for OCWD as a public supplier for metropolitan Orange County.

Project Location and Description

The study area lies within the Santa Ana River Watershed and encompasses most of the Prado Dam Basin and extends downstream along the Santa Ana River for seven miles. While the feasibility study considers impacts of potential measures within the entire study area, the study team further refined the project area into four focal areas where the measures would be implemented (enclosure 2). The four focal areas include two small creeks, Chino Creek and Mill Creek, that feed into the Santa Ana River, a seven mile stretch of the Santa Ana River Mainstem downstream of the dam (SARM downstream), and a six mile segment of the Santa Ana River Mainstem upstream of the dam (SARM upstream). Specific measures that may occur within each focal area, depending on the alternative plan eventually selected, are discussed below.

Water Conservation (SARM upstream)

Under the water conservation measure, the Corps would amend the current Prado Dam Water Control Manual to allow an increase in the water surface elevation of the buffer pool during the flood season (October 1st to February 28/29th), from 498'to 505' for water conservation purposes. Water conservation is already authorized to the 505' elevation during the non-flood season (March 1st thru September 30th). Under this measure, there would be no changes to the non-flood season pool levels. During the flood season, water levels are often held above 498 feet, but its purpose is for flood control not water conservation. Without the proposed modification, flood waters are released as rapidly as possible to draw the pool down to the 498 foot elevation during the flood season. With the proposed modification, flood waters would be retained up to the 505 elevation and released more slowly, allowing more water to be captured in OCWD's recharge facilities downstream of the dam. The seven foot area between 498 and 505 feet has been seasonally submerged since the dam was constructed in 1941 with the potential for higher inundation levels to occur up to 556 feet during major storm events. Planned modifications to the dam's spillway (authorized as part of the Corps' Santa Ana River Mainstem Project, separate from this feasibility study) would allow for flood storage up to 566 feet. Additionally, the Water Conservation Measure includes a permanent reduction on the average outflow release rate from Prado Dam from March 1st to August 30th from 500 cfs to 350 cfs to maximize groundwater recharge potential.

Sediment Management (SARM Upstream and Downstream)

Prado Dam acts as a barrier to natural transport of sediment to the lower Santa Ana River. Under this measure, sediment would be removed from Prado Basin and re-entrained into the lower Santa Ana River below the dam. In order to capture the sediment, an entrainment groin

would guide the Santa Ana River stream flow into a trapezoidal earthen transition channel which in turn would move the water and sediment into the sediment trap, from which sediment would be regularly removed either through dredging or dry excavation, depending on the water level at the time. The transition channel would also include three fill areas where material would be placed to provide for the design gradient.

After being removed, the sediment would be piped or hauled to two sediment storage sites where the sediment would be mixed into a slurry. The slurry would be pumped around the Auxiliary Dike of the Prado Dam and then discharged at the end of the downstream outlet channel structure. Pumps would be used to deliver the slurry via two 24-inch diameter pipes over a length of 2,600 feet each. Using the sediment trap, Approximately 2,552,000 cubic yards of material would be removed from Prado Basin over a 50 year period. During years 2 to 5, a total of approximately 1,149,652 cubic yards would be re-entrained and during years 6 to 50, approximately 600,000 cubic yards of material would be re-entrained annually into the lower Santa Ana River. Of all the measures, the sediment management features would require the most ground disturbance. The area where the entrainment groin, transitional channel, and sediment trap would be placed has accumulated up to 25 feet of sediment since the dam was constructed in 1941 and archaeological sites are unlikely to be present at these locations. The sediment storage areas and pipelines are outside of this accumulation of sediment and have a higher likelihood of encountering intact cultural resources.

Chino Creek Channel Restoration (Chino Creek)

This measure involves the construction of a new shallow channel along the west side of Chino Creek between Euclid Avenue and Pine Avenue. The shallow channel would promote riparian habitat growth over areas that currently do not receive enough water to support riparian habitat. A portion of Chino Creek would be filled in order to force the water into the new shallow channel. This measure includes the construction of a diversion pipe and bio-engineered invert stabilizers and would have an overall construction footprint of 170 acres.

Invasive Plant Management (All Focal Areas)

This measure involve the use of herbicides, hand tools and mechanized equipment to remove the biomass of invasive plants. A total of approximately 390 acres of invasive plants would be removed across all four focal areas: approximately 248 acres of invasive plants would be removed from the SARM upstream focal area, 14 acres from the SARM downstream focal area, 69 acres from the Chino Creek focal area and 59 acres from the Mill Creek focal area. Not all areas to be treated for removal of non-native plants would be treated at the same time. A phased approach to implementation would have to be used given the areal extent and density of non-native plants present within the areas identified for management. The measure also includes the planting and management of native species to promote the re-establishment of native vegetation communities in areas that have been treated to remove invasive plants. Due to the size of the focal areas and minimal ground disturbance associated with this measure, it is anticipated that any adverse impacts to cultural resource can be avoided.

Native Plantings (SARM Upstream, Chino Creek and Mill Creek)

The native plantings measure would be carried out at locations identified for restoration of native vegetation where minimal removal of invasive plants would be required prior to

revegetation with native plants. Plantings would include seeding, pole staking, and planting of nursery-grown plants at areas that have reduced vegetative cover. Over the three focal areas, approximately 104 acres of area would be cleared and planted with native plantings. Approximately 43 acres of native plantings would occur at the SARM Upstream focal area, 44 acres at the Chino Creek focal are and 17 acres at the Mill Creek focal area. Each site would require some site preparation, but it would be expected to be minimal in comparison to the invasive plant management measure. Site preparation would be expected to include minor grading and a minimal amount of weed management. As with the invasive plant management measure, it is anticipated that any adverse effects to cultural resources can be avoided.

Riparian Edge Management (SARM Upstream)

This measure involves invasive plant removal, native plantings, vegetation trimming and maintenance to maintain a thriving riparian edge habitat for neo-tropical migratory birds and to provide a buffer to more interior habitats from potential road effects. Riparian edge management would be conducted along the proposed sediment removal trap channels and OCWD diversion channel. Approximately 44 acres of new riparian edge habitat would be created.

In-Stream Habitat Features (SARM Upstream)

In-stream habitat features would be composed of approximately 15 rock groins, measuring 10 ft. x 45 ft. (450 sq. ft.), that would be intended to create localized pools and exposing of existing gravel beds and cobbles that are presumed to be buried under a lens of sand. The SARM upstream in-stream habitat features would be located within the transitional channel leading towards the sediment trap. These features would be located within the stream bed where cultural resources are unlikely to occur.

In-Stream Habitat Features (SARM Downstream)

At the SARM downstream focal area, 15 in-stream habitat features, measuring 70 ft. x 100 ft. (7,000 sq. ft.) each would be constructed. These features would induce upstream sediment deposition and localized downstream scour. These features would expose coarser grained sediment in localized scour areas to serve as fish habitat, and would also sequester sediment that is being re-entrained downstream as a part of the sediment management measure to help combat observed and expected channel incision. As with the upstream habitat features measure, the features would be located within the stream bed where cultural resources are unlikely to occur.

Non-Native Wildlife Management (SARM Upstream, SARM Downstream, Chino Creek, and Mill Creek)

The study has also identified several measures to address the presence of non-native wildlife species that adversely impact native species. These measures include cowbird trapping, the removal of large predatory fish through netting, seining, or electrofishing, and the removal of feral pigs through a combination or trapping, telemetry and other population control techniques. These measures are not expected to affect cultural resources.

Area of Potential Effect

The Corps has defined the APE as the study area for the feasibility project which approximately follows the planned 566' flood storage capacity elevation within the Basin, and the seven mile reach of river downstream of Prado Dam. While implementation of ground

disturbance will be limited to the four focal areas, further project refinements could expand beyond their current boundaries. The APE includes both direct and indirect effects that may occur from implementation of the undertaking. The APE includes a reasonable and good-faith effort to capture the potential for visual, auditory, and other non-direct effects (enclosure 3).

Summary

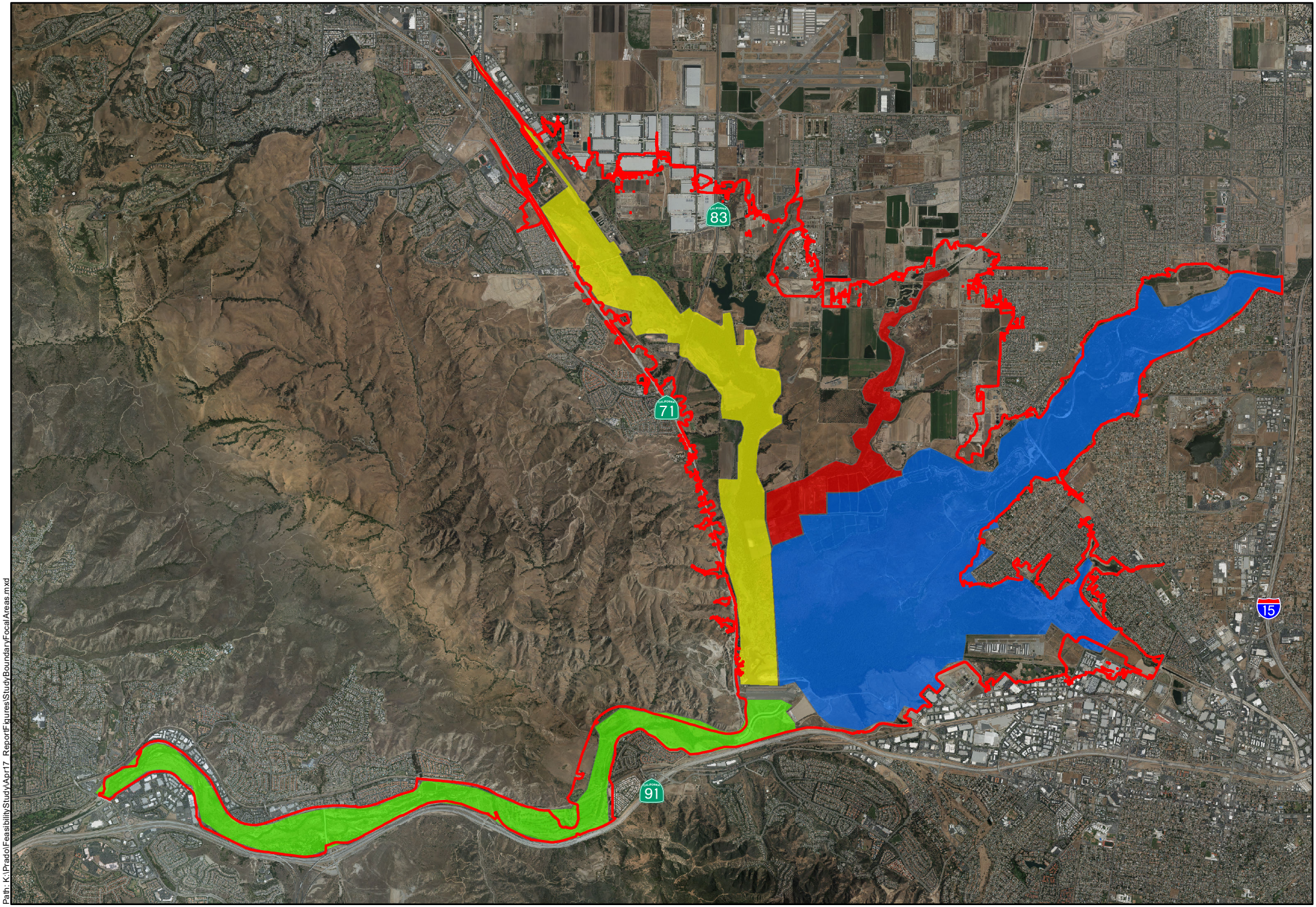
The Corps and OCWD have identified preliminary measures that would effectively address some key issues within the basin. These measures are being packaged into alternatives that will be evaluated. There will be several opportunities for your engagement in this study. A draft Integrated Feasibility Report is being prepared and will be sent to you for your review and comment within the next few months. The Corps will continue to engage with you regarding our responsibilities under Section 106 of the National Historic Preservation Act.

By this letter, the Corps requests your comments on the appropriateness of the APE for the proposed undertaking (pursuant to §800.4(a)(l)). The Corps is concurrently notifying the State Historic Preservation Office and other affected Tribes in the area. The Corps would appreciate any comments you may have on the appropriateness of our APE and/or any comment you have on the project at your earliest convenience or within 30 days. If you have any questions, please contact Ms. Danielle Storey, Archaeologist via phone at (213) 452-3855 or via email at Danielle.L.Storey@usace.army.mil.

Sincerely,

Eduardo T. De Mesa
Chief, Planning Division

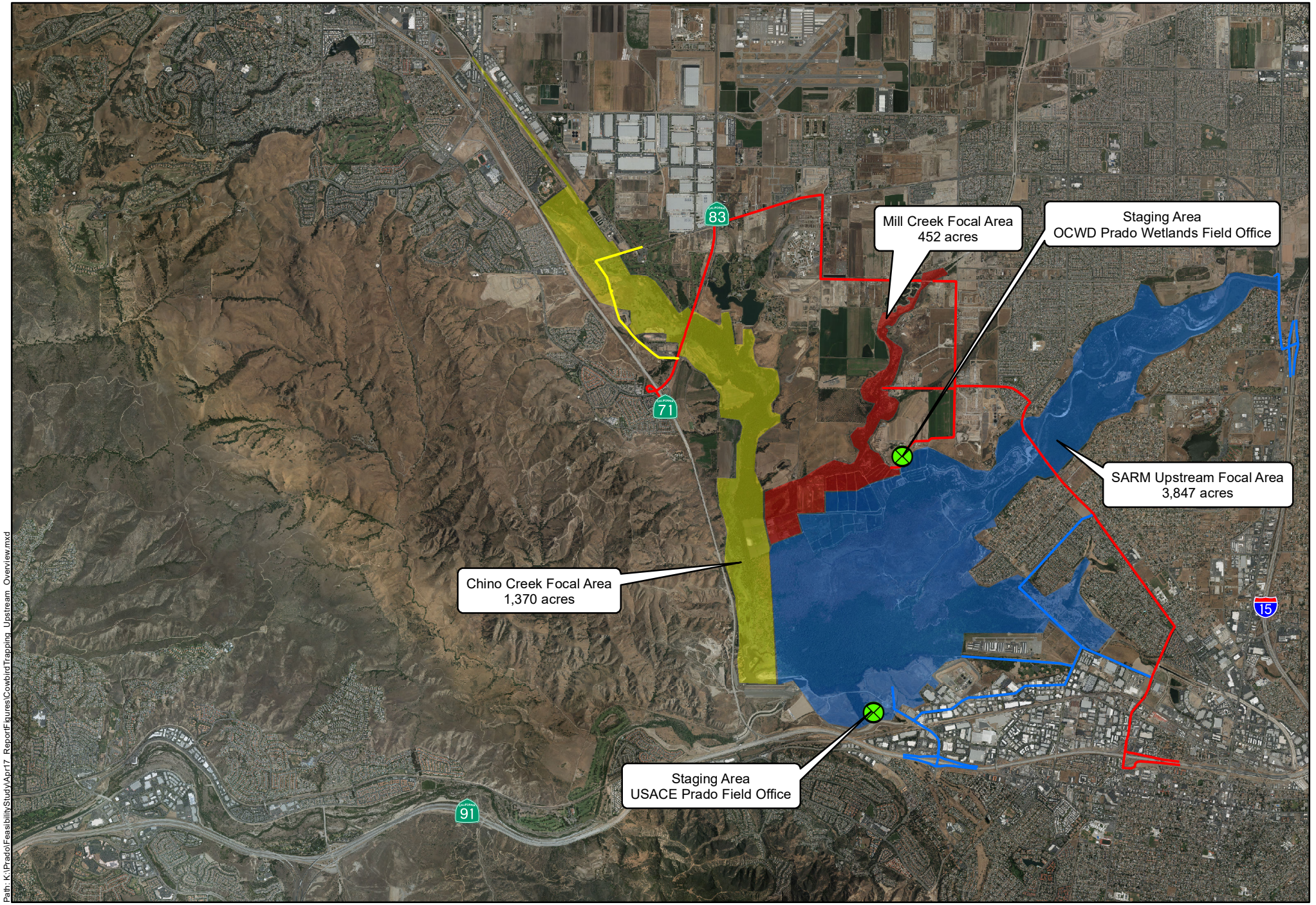
Enclosure(s)



Prado Basin Feasibility Report
Study Boundary & Focal Areas

Figure 2

Enclosure 1



Path: K:\Prado\FeasibilityStudy\Apr17 ReportFigures\CowbirdTrapping_Upstream_Overview.mxd

N
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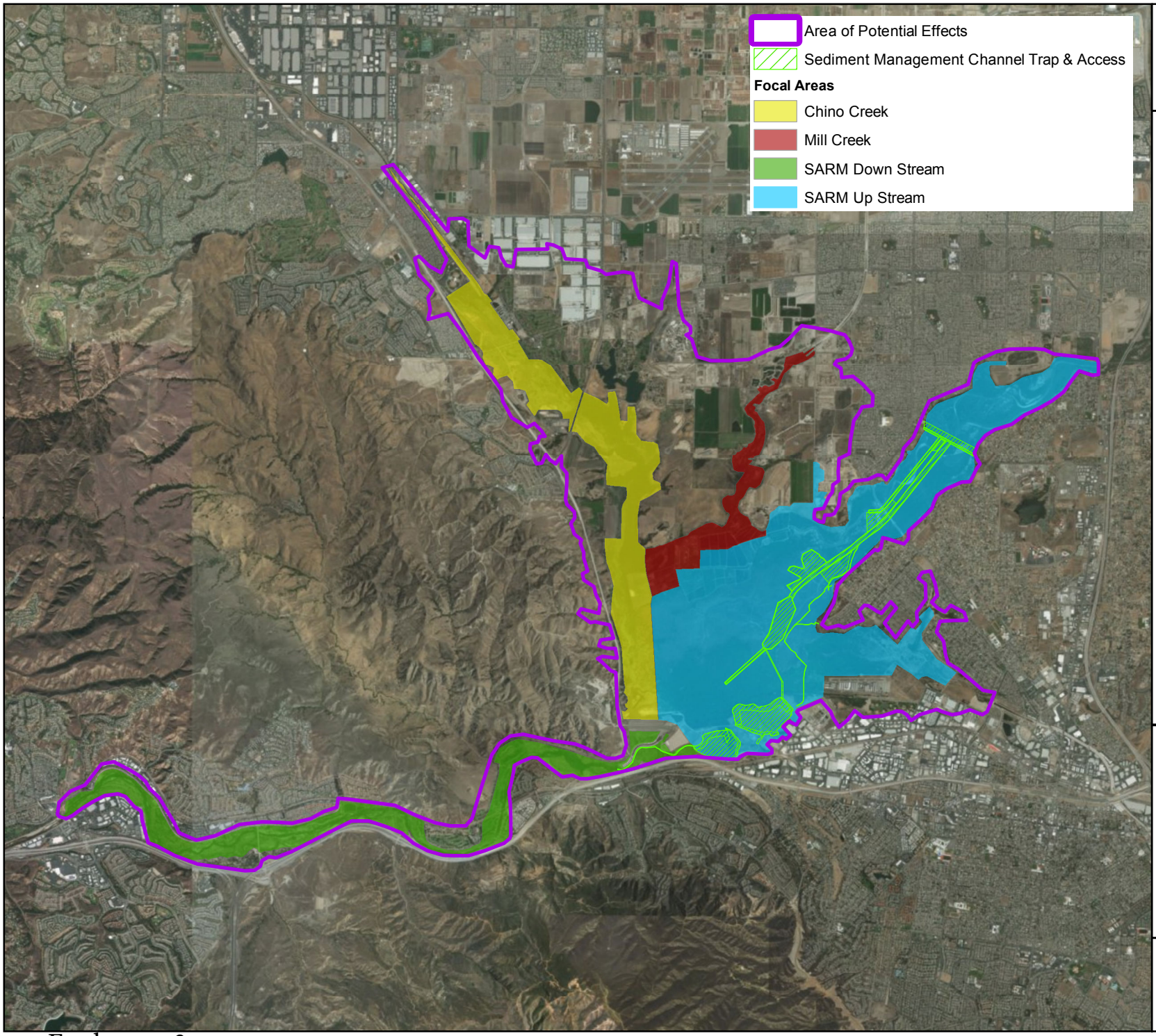
S

0 3,100 6,200
Feet

Prado Basin Feasibility Report
Cowbird Trapping Areas

Figure 20

Enclosure 2



Orange County Water District

PRADO BASIN: Area of Potential Effects

N
W E
S

0 3,750 7,500
Feet

1 in = 7,500 ft

Map Date: April 2018
Data Source: OCWD, ESRI

Enclosure 3

From: Administration Gabrieleno Indians
To: Storey, Danielle L CIV USARMY CESPL (US)
Subject: [Non-DoD Source] Aquatic, riparian, Corona Riverside County Santa Ana River Washed
Date: Monday, June 11, 2018 10:49:09 AM

Dear Eduardo T. De Mesa,

Thank you for your letter dated June 4, 2018. If there will be any ground disturbance taking place regarding our project our Tribal government would like to consult with your agency.
Thank you

Sincerely,

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: Blockedwww.gabrielenoindians.org <Blockedhttp://www.gabrielenoindians.org>
<Blockedhttps://docs.google.com/uc?
export=download&id=14ZAJLMaFqvegSjuwqUdHi6Uo_en9B0lj&revid=0B59dKMbTi9olOG03eGpVRnJkeGQ2OGRxYll4R2h2RE82WFhBPQ>

PECHANGA CULTURAL RESOURCES
Temecula Band of Luiseño Mission Indians

Post Office. Box 2183 • Temecula, CA 92593
Telephone (951) 770-6300 • Fax (951) 506-9491

June 14, 2018

VIA E-MAIL and USPS

Danielle Storey, Archaeologist
Dept. of the Army
LA District, U.S. Army corps of Engineers
915 Wilshire BLVD, Ste. 930
Los Angeles, CA 90017

Re: Pechanga Tribe Request for Consultation Pursuant to Section 106 for the U.S. Army Corps of Engineers Prado Dam Feasibility Study Project

Dear Ms. Storey

This letter is written on behalf of the Pechanga Band of Luiseño Indians (hereinafter, "the Tribe"), a federally recognized Indian tribe and sovereign government in response to the Section 106 National Historic Preservation Act Consultation notice dated June 4, 2018 and received in our office June 13, 2018 on the above referenced Project. This letter serves as the Tribe's formal request for consultation with the Army Corps of Engineers (Corps) under Section 106 for this Project. We would like to receive additional detailed information about the proposed Project and meet with the Corps to discuss this further.

The Tribe formally requests to be notified and involved in the entire environmental review process for the duration of the above referenced Project. Please add the Tribe to your distribution list(s) for public notices and circulation of all documents, including environmental review documents, archaeological reports, and all documents pertaining to this Project. The Tribe further requests to be directly notified of all public workshops or hearings and scheduled approvals. Please also incorporate these comments into the record of approval.

The Pechanga Tribe asserts that portions of the Project area are part of '*Atáaxum* (Luiseño), and therefore the Tribe's, aboriginal territory as evidenced by the existence of cultural resources, place names, *tóota yixélval* (rock art, pictographs, petroglyphs), and an extensive 'Atáaxum artifact record in the vicinity of the undertaking. This culturally sensitive area is affiliated with the Pechanga Band of Luiseño Indians because of the Tribe's cultural ties to this area as well as an extensive documentation of the Tribe's ancestors living in the Corona area. We are happy to provide additional information regarding our tribal affiliation in our consultation.

Under both NEPA and Section 106, we look forward to working closely with the Corps on ensuring that a full, comprehensive environmental review of the Project's effects is completed, which includes analysis and discussion of any sensitive cultural resources that could potentially be effected by this Project and any future projects, whether they be direct, indirect or cumulative effects. Further, we hope to assist the Corps with ensuring that the Project will provide every effort to avoid effects to cultural resources in addition to addressing the culturally appropriate and respectful treatment of human remains, cultural resources and inadvertent discoveries, should they be effected during the future proposed maintenance activities. As such, we request a face-to-face meeting with the Corps to receive additional information about the Project and to discuss our concerns further.

In addition to those rights granted to the Tribe under Section 106, the Tribe reserves the right to fully participate in the environmental review process, as well as to provide further comment on the Project's effects to cultural resources and potential avoidance and mitigation for such effects.

The Pechanga Tribe looks forward to working together with the Army Corps of Engineers in protecting the invaluable Pechanga cultural resources that could be effected by the issuance of the requested permits. Please contact me at 951-770-6313 or at eozdil@pechanga-nsn.gov once you have had a chance to review these comments so that we can schedule our consultation. Thank you.

Sincerely,

Tuba Ebru Ozdil
Cultural Analyst

cc: Pechanga Office of the General Counsel

From: Storey, Danielle L CIV USARMY CESPL (US)
To: Fossum, Larry (TRBL)
Subject: RE: Prado Dam Project
Date: Tuesday, July 03, 2018 11:43:00 AM

Thank you for letting me know.

-----Original Message-----
From: Fossum, Larry (TRBL) [mailto:lfossum@aguacaliente.net]
Sent: Tuesday, July 03, 2018 11:01 AM
To: Storey, Danielle L CIV USARMY CESPL (US) <Danielle.L.Storey@usace.army.mil>
Subject: [Non-DoD Source] Prado Dam Project

Dear Danielle:

A records check of the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to other tribes in the area. This letter shall conclude our consultation efforts.

Cordially,

Larry Fossum

On behalf of Patricia Garcia-Plotkin

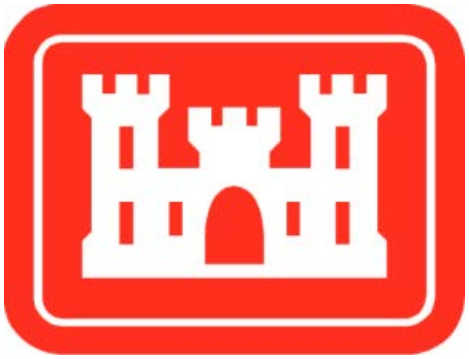
Director of Historic Preservation

Agua Caliente Band of Cahuilla Indians

Appendix I

Cultural Resources

Part 3: Previous Consultations



Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, #401
Golden, Colorado 80401

April 7, 1992

Colonel Charles Thomas
District Engineer
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053-2325

REF: Memorandum of Agreement regarding the Prado Water Conservation Project

Dear Colonel Thomas:

The enclosed Memorandum of Agreement regarding the Prado Water Conservation Project has been accepted by the Council. This action constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. Please send copies of the signed Agreement to California State Historic Preservation Officer, the concurring parties, and your Federal Preservation Officer.

The Council appreciates your cooperation in reaching a satisfactory resolution of this matter and looks forward to receiving a treatment plan for the project within the next year.

Sincerely,

Claudia Nissley
Director, Western Office
of Project Review

Enclosure

MEMORANDUM OF AGREEMENT

SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 CFR 800.6(a)

WHEREAS, the U.S. Army Corps of Engineers, Los Angeles District (Corps) has determined that the Prado Water Conservation Project will have an effect on the Aros-Serrano Adobe (CA-Riv-2778), CA-Riv-2802, CA-Riv-2804, and the Rincon Townsite (PB-102), properties eligible for inclusion in the National Register of Historic Places, and has consulted with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the Orange County Water District and the local Native American Gabrielino groups participated in the consultation and have been invited to concur in this Memorandum of Agreement;

NOW, THEREFORE, the Corps and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The Corps will ensure that the following measures are carried out:

1. The Corps shall ensure that a data recovery plan is developed in consultation with the SHPO for the recovery of archeological data from archaeological sites CA-Riv-2802, CA-Riv-2804, and the Rincon Townsite (PB-102). The plan shall be consistent with the *Secretary of the Interior's Standards and Guidelines for Archeological Documentation* (48 FR 44734-37) and take into account the Advisory Council on Historic Preservation (Council) publication, *Treatment of Archeological Properties: A Handbook* (Advisory Council on Historic Preservation, [draft] November, 1980), subject to any pertinent revisions the Council may make in the publication prior to completion of the data recovery plan. It shall specify, at a minimum:

   a. the property, properties, or portions of properties where data recovery is to be carried out;

   b. any property, properties, or portions of properties that will be altered without data recovery;

   c. the research questions to be addressed through the data recovery, with an explanation of their relative importance;

   d. the methods to be used, with an explanation of their relevance to the research questions;

e. the methods to be used in the analysis, data management, and dissemination of data, including a schedule;

f. the proposed disposition of recovered materials and records;

g. proposed methods for involving the interested public in the data recovery;

h. proposed methods for disseminating results of the work to the interested public;

i. proposed methods by which interested Native Americans will be kept informed of the work and afforded the opportunity to participate;

j. a proposed schedule for the submission of progress reports to the SHPO, Council and interested Native American Groups.

k. proposed methods for the treatment of historic properties exposed as a result of project-related causes such as wave action or erosion.

2. The Corps will ensure that the data recovery plan is developed and implemented before the spring of 1993, when the water level of the reservoir potentially will be raised a second time to the 505 foot contour. Development and implementation of the data recovery plan will not be possible before the initial raising of the reservoir water level in the spring of 1992. The data recovery plan shall be submitted by the Corps to the SHPO and the Council for thirty (30) day review. Unless the SHPO or the Council objects within thirty (30) days after receipt of the plan, the Corps shall ensure that it is implemented.

3. The Corps will ensure that all historic preservation work carried out under this Agreement is carried out by or under the direct supervision of a person or persons meeting the minimum professional standards set forth in *Archaeology and Historic Preservation: Secretary of the Interiors Standards and Guidelines* (Federal Register, Volume 48, Number 190, pages 44738-44739 [Thursday, September 29, 1983]) (the Secretary's Standards).

4. The Corps will periodically monitor the effects of the raising of the reservoir level from the 494 foot contour to the 505 foot contour and present the results of the inspection in a bi-annual report. The reports will be provided by the Corps to the SHPO on or before October 1 every two years, the first such report being due on October 1, 1994. Possible effects to be considered in the bi-annual report include the exposure and erosion of buried archaeological sites resulting from project-related wave activity. According to the historic record, at least twelve archaeological sites may be buried beneath silt within the Area of Potential Effects. If evidence of these archaeological sites or other historic properties is discovered at any time during or after project implementation, the Corps will consult with the SHPO and with the Council within two working days of the discovery. The Corps will allow the Council and the SHPO the opportunity to comment in one of two ways; (1) the Corps will comply with 36 CFR 800.6 or (2) the Corps will develop a plan to take into account the effects upon the historic property and seek interim comments from the SHPO

and the Council. The SHPO and the Council shall provide interim comments to the Corps on discovery within forty-eight (48) hours of the Corps' request and shall submit final comments to the Corps within thirty (30) days of the Corps' request. Monitoring will include recording and reporting of major features or artifact concentrations uncovered, and recovery/curation of a sample of materials where practicable.

5. The Corps will ensure that all records resulting from the data recovery are curated in accordance with 36 CFR Part 79, and that all materials resulting from the data recovery are maintained in accordance with 36 CFR part 79 until their analysis is complete.

6. Should the SHPO, or the Council object within thirty (30) days to any plans pursuant to this agreement, the Corps shall consult with the objecting party to resolve the objection. If the Corps determines that objection cannot be resolved the Corps shall forward all documentation relevant to the dispute to the Council. Within fifteen (15) days after receipt of all pertinent documentation, the Council will either:

a. provide the Corps with recommendations, which the Corps will take into account in reaching a final decision regarding the dispute; or

b. notify the Corps that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the Corps in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

Any Recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; the Corps' responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

7. At any time during implementation of the measures stipulated in this agreement, should an objection to any such measure or its manner of implementation be raised by a member of the public, the Corps shall take the objection into account and consult as needed with the objecting party, the SHPO or the Council to resolve the objection.

Execution of this Memorandum of Agreement by the Corps and the California SHPO, its subsequent acceptance by the Council, and implementation of its terms, evidence that the Corps has afforded the Council an opportunity to comment on the Prado Water Conservation Project and its effects on historic properties, and that the Corps has taken into account the effects of the undertaking on historic properties.

U.S. Army Corps of Engineers, Los Angeles District

BY: Charles S. Thomas Date: 17 March 92

Charles S. Thomas
Colonel, Corps of Engineers
District Engineer

California State Historic Preservation Officer

BY: Stanley L. Craig Date: 3/19/1992

ACCEPTED for the Advisory Council on Historic Preservation

BY: Robert D. Bush Date: 4/3/92

APPROVED AS TO FORM
By Clyde S Hale
General Counsel for
Orange County Water District

CONCUR:

Orange County Water District

BY: Date: 3/18/92

BY: Date: 3/18/92

Interested Native American Groups

BY: Vera Rocha (Gabrielino Chief) Date: 3-18-92

BY: Emanuel Rocha Spiritual Leader Date: 3-18-92

BY: Date: